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# UNDERGRADUATE CATALOG

# 1991 - 1992

**Florida International University**

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# Florida International University

Member of the State University System
Miami, Florida

## 1991 – 1992 Undergraduate Catalog

### Contents


| | |
|---|---|
| 2 | Academic Calendar |
| 5 | State Board of Education |
| 5 | Florida Board of Regents |
| 5 | University Officials |
| 5 | General Information |
| 6 | Accreditation and Memberships |
| 6 | Southeast Florida Educational Consortium |
| 6 | Academic Degree Programs |
| 8 | Certificate Programs |
| 8 | Admissions |
| 16 | Registration |
| 18 | Academic Regulations |
| 21 | Florida Residency Information |
| 22 | Financial Aid |
| 26 | Student Fees and Student Accounts |
| 28 | Academic Affairs |
| 31 | Student Affairs |
| 34 | Business and Finance |
| 36 | North Miami, Information Resource Management, and Budget Planning |
| 37 | University Relations and Development |
| 37 | Centers and Institutes |
| 43 | Statewide Course Numbering System |
| 44 | Administration and Staff |
| 46 | College of Arts and Sciences |
| 149 | College of Business Administration |
| 165 | College of Education |
| 192 | College of Engineering and Design |
| 221 | College of Health |
| 236 | School of Hospitality Management |
| 241 | School of Nursing |
| 245 | School of Public Affairs and Services |
| 258 | Air Force and Army ROTC |
| 259 | Marine Officer Programs |
| 260 | Campus Maps |
| 262 | Index |



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Florida International University believes in equal opportunity practices which conform to all laws against discrimination and is committed to nondiscrimination with respect to race, color, creed, age, handicap, sex, marital status, or national origin. Additionally, the University is committed to the principle of taking the positive steps necessary, to achieve the equalization of educational and employment opportunities.

**Note:** The programs, policies, requirements, and regulations published in this catalog are continually subject to review in order to serve the needs of the University's various publics and to respond to the mandates of the Florida Board of Regents and the Florida Legislature. Changes in programs, policies, requirements, and regulations may be made without advance notice.

**The ultimate responsibility for knowing degree requirements and the requirements imposed upon students by State law rests with the students.**


This document was produced at an annual cost of $35,481 or $0.82 per copy to inform the public about University Programs.


Fees given in this catalog are tentative pending legislative action.

# ACADEMIC CALENDAR 1991-1992*

## Fall Semester 1991

| | |
|---|---|
| April 1 | Last day for International Students to submit applications for Fall Term admission. |
| June 1 | Last day to submit applications for Fall Term admission (except international students).<br>• Last day for International Students to submit all required supporting documents for Fall Term admission. |
| July 8 - 9 | Freshman Orientation Sessions |
| July 11 - 12 | Freshman Orientation Sessions |
| July 18 - 19 | Freshman Orientation Sessions |
| July 22 - 26 | Control Cards available for student pick-up.<br>• Short Term Tuition Loan Applications available to students planning to register. |
| July 22 - 23 | Freshman Orientation Sessions |
| July 24 - 26 | Transfer Students Orientation Sessions. |
| July 29 - August 2 | Official Registration Week (Degree-Seeking Students only) by appointment time and day. |
| August 5 - 9 | Open Registration Week. |
| August 7 | Last day to apply for Short Term Tuition Loans for students already registered. |
| August 9 | Last day to pay tuition and fees to retain registered courses by 5 p.m.<br>• Last day for Financial Aid recipients to validate class schedules to retain registered courses.<br>• Last day to sign Short Term Tuition Loan promissory notes and validate class schedules for students already registered. |
| August 18 | Housing Check-in 9 a.m. to 8 p.m. |
| August 19 | Short Term Tuition Loan Applications available to students planning to register on Registration Day.<br>• Transfer Students Orientation. |
| August 19 - 20 | Freshmen Orientation Sessions. |
| August 21 | Telephone Registration available. |
| August 22 | Registration Day (10 a.m. to 7:30 p.m.) |
| August 26 | Classes Begin.<br>• Last day to apply for Short Term Tuition Loans for students who registered on or after Registration Day. |
| August 26 - 30 | Registration for State Employees using fee waivers. |
| August 30 | Last day to complete Late Registration by 5 p.m.<br>• Drop/Add Period ends at 5 p.m.<br>• Last day to drop courses or withdraw from the University without incurring a financial liability by 5 p.m.<br>• Last day to pay tuition and fees to avoid cancellation of enrollment by 5 p.m.<br>• Last day for Financial Aid recipients applicants to validate class schedules to retain registered courses on Registration Day. |
| August 30 | Last day to sign Short Term Tuition Loan promissory notes for students who registered on Registration Day. |
| September 2 | Labor Day Holiday (University closed). |
| September 6 | Last day to register for the October 5th CLAST exam. |
| September 9 - 10 | Rosh Hashanah (No examinations or major quizzes may be given during the designated hours. Jewish holidays begin at 4 p.m. the day before the holiday and end at 7 p.m. the day of the holiday.) |
| September 18 | Yom Kippur (No examinations or major quizzes may be given during the designated hours. Jewish holidays begin at 4 p.m. the day before the holiday and end at 7 p.m. the day of the holiday.) |
| September 20 | Last day to apply for graduation by 5 p.m.<br>• Last day to withdraw from the University with a 25% refund of tuition less bonding fees by 5 p.m. |
| October 4 | Faculty Convocation. |
| October 5 | CLAST Test. |
| October 18 | Last day to drop a course with a DR grade by 5 p.m.<br>• Last day to withdraw from the University with a WI grade by 5 p.m. |
| November 11 | Veterans' Day Holiday (University closed). |
| November 28 - 29 | Thanksgiving Holiday (University closed). |
| December 6 | Classes End. |
| December 7 - 14 | Official Examination Period. |
| December 17 | Grades due. |
| December 19 | Grades Mailed to Students. |

## Spring Semester 1992

| | |
|---|---|
| October 1 | Last day for International Students to submit applications for Spring Term admission. |
| November 1 | Last day for admission for International Students to submit all required supporting documents for Spring Term admission.<br>• Last day to submit applications for Spring Term admission (except international students). |
| November 12 - 15 | Control Cards available for pick-up.<br>• Short Term Tuition Loan and Tuition Waiver Applications available to students planning to register for Spring Term. |
| November 14 - 15 | Freshmen Orientation Sessions |
| November 18 | Transfer Students Orientation Session. |

| | |
|---|---|
| November 18 - 22 | Official Registration Week (Degree-Seeking Students only) by appointment time and day. |
| December 2 - 6 | Open Registration. |
| December 4 | Last day to apply for Short Term Tuition Loans for students already registered. |
| December 6 | Last day to pay tuition and fees to retain registered courses by 5 p.m.<br>• Last day for Financial Aid recipients to validate class schedules to retain registered courses.<br>• Last day to sign Short Term Tuition Loan promissory notes and validate class schedules for students already registered. |
| December 30 | Short Term Tuition Loan Applications available to students registering on Registration Day. |
| January 2 | Housing check-in 9 a.m. - 8 p.m.<br>• Telephone Registration available. |
| January 3 | Registration Day (10 a.m. to 7:30 p.m.)<br>• Financial Aid Applications available for 1992-1993. |
| January 6 | Classes Begin. |
| January 6 - 10 | Registration for State Employees using fee waivers. |
| January 8 | Last day to apply for Short Term Tuition Loans for students who registered on or after Registration Day. |
| January 10 | Last day to complete Late Registration by 5 p.m.<br>• Drop/Add Period ends at 5 p.m.<br>• Last day to drop courses or withdraw from the University without incurring a financial liability by 5 p.m.<br>• Last day to pay tuition and fees to avoid cancellation of enrollment by 5 p.m.<br>• Last day for Financial Aid recipients applicants to validate class schedules to retain registered courses on Registration Day.<br>• Last day to sign Short Term Tuition Loan promissory notes and validate class schedules for students who registered on Registration day. |
| January 20 | Martin Luther King Holiday (University Closed). |
| January 24 | Last day to register for the February 22nd CLAST exam. |
| January 31 | Last day to apply for graduation by 5 p.m.<br>• Last day to withdraw from the University with a 25% refund of tuition less bonding fees by 5 p.m. |
| February 22 | CLAST Test. |
| February 28 | Last day to drop a course with a DR grade by 5 p.m.<br>• Last day to withdraw from the University with a WI grade. |
| March 2 - 7 | Spring Break. |
| April 1 | Deadline for 1992-1993 Financial Aid Applications for priority consideration. |
| April 17 | Classes End.<br>• Good Friday (No examinations or major quizzes may be given during the designated hours.) |
| April 18 - 19 | Passover (Students who observe Passover must make arrangements with their instructors for alternate examination times. Jewish holidays begin 4 p.m. the day before the holiday and end at 7 p.m. the day of the holiday.) |
| April 18 - 25 | Official Examination Period. |
| April 24 - 25 | Passover ( Students who observe Passover must make arrangements with their instructors for alternate examination times.Jewish holidays begin 4 p.m. the day before the holiday and end at 7 p.m. the day of the holiday.) |
| April 27 | Commencement Exercises. |
| April 28 | Grades due. |
| April 30 | Grades Mailed to Students. |

## Complete Summer Semester 1992

| | |
|---|---|
| February 1 | Last day for International Students to submit applications for Summer Term admission. |
| March 1 | Last day for admission for International Students to submit all required supporting documents for Summer Term.<br>• Last day to submit applications for Summer Term admission (except international students). |
| March 23 | Short Term Tuition Loan Applications available to students registering for the Summer Terms. |
| March 23 - 27 | Control Cards available for pick-up. |
| March 26 - 27 | Freshmen Orientation Complete Summer Term and Summer Term A. |
| March 30 | Transfer Students Orientation Complete Summer Term and Summer Term A. |
| March 30 - April 3 | Official Registration Week (Degree-Seeking Students only) by appointment time and day. |
| April 6 - 10 | Open Registration. |
| April 8 | Last day to apply for Short Term Tuition Loans for students already registered. |
| April 10 | Last day to pay tuition and fees to retain registered courses by 5 p.m.<br>• Last Day for Financial Aid recipients to validate class schedules to retain registered courses.<br>• Deadline date for 1990-1991 Financial Aid Application for priority consideration.<br>• Last day to sign Short Term Tuition Loan promissory notes and validate class schedules for students already registered. |
| April 30 | Short Term Tuition Loan Applications available to students who plan to register on Registration Day. |
| May 3 | Housing Check-in 9 a.m. to 8 p.m. |
| May 4 | Registration Day (10 a.m. to 7:30 p.m.).<br>• Last day to register for the June 6th CLAST exam. |

| | |
|---|---|
| May 6 | Classes Begin. |
| May 6 - 12 | Registration for State Employees using fee waivers. |
| May 8 | Last day to apply for Short Tuition Loans for students who registered on Registration Day. |
| May 12 | Last day to complete Late Registration by 5 p.m.<br>• Drop/Add Period ends at 5 p.m.<br>• Last day to drop courses or withdraw from the University without incurring a financial liability by 5 p.m.<br>• Last day to pay tuition and fees to avoid cancellation of enrollment by 5 p.m.<br>• Last day for Financial Aid recipients to validate class schedules to retain registered courses on Registration Day.<br>• Last day to sign Short Term Tuition Loan promissory notes and validate class schedules for students who registered on Registration day. |
| May 25 | Memorial Day Holiday (University closed). |
| May 29 | Last day to apply for Graduation by 5 p.m.<br>• Last day to withdraw from the University with a 25% refund of tuition less bonding fees by 5 p.m. |
| June 6 | CLAST Test. |
| June 26 | Last day to drop a course with a DR grade by 5 p.m.<br>• Last day to withdraw from the University with a WI grade by 5 p.m. |
| July 3 - 4 | Independence Day Holiday (University closed). |
| August 13 | Classes End. |
| August 17 | Grades due. |
| August 19 | Grades Mailed to Students. |

## Summer Term A

| | |
|---|---|
| March 26 - 27 | Freshmen Orientation Sessions. |
| March 30 | Transfer Students Orientation Session All Summer Sessions. |
| May 4 | Registration Day. |
| May 6 | Classes Begin. |
| May 6 - 12 | Registration for State Employees using fee waivers. |
| May 12 | Last day to complete Late Registration by 5 p.m.<br>• Drop/Add Period ends at 5 p.m.<br>• Last day to drop courses or withdraw from the University without incurring a financial liability by 5 p.m.<br>• Last day to pay tuition and fees to avoid cancellation of enrollment by 5 p.m.<br>• Last Day for Financial Aid recipients to validate class schedules to retain registered courses. |
| May 15 | Last day to withdraw from the University with a 25% refund of tuition less bonding fees by 5 p.m. |
| May 25 | Memorial Day Holiday (University closed). |
| May 29 | Last day to apply for graduation by 5 p.m.<br>• Last day to drop a course with a DR grade by 5 p.m.<br>• Last day to withdraw from the University with a WI grade by 5 p.m. |
| June 6 | CLAST Test. |
| June 23 | Classes End.** |
| August 17 | Grades Mailed to Students. |

## Summer Term B

| | |
|---|---|
| May 29 | Last day to apply for graduation by 5 p.m. |
| June 18 - 19 | Freshmen Orientation Sessions. |
| June 25 | Registration Day. |
| June 29 | Classes Begin. |
| June 29 - July 6 | Registration for State Employees using fee waivers. |
| July 3 - 4 | Independence Day (University closed). |
| July 6 | Last day to complete Late Registration by 5 p.m.<br>• Drop/Add Period ends at 5 p.m.<br>• Last day to drop courses or withdraw from the University without incurring a financial liability by 5 p.m.<br>• Last day to pay tuition and fees to avoid cancellation of enrollment by 5 p.m.<br>• Last Day for Financial Aid recipients to validate class schedules to retain registered courses. |
| July 10 | Last day to withdraw from the University with a 25% refund of tuition less bonding fees by 5 p.m. |
| July 24 | Last day to drop a course with a DR grade by 5 p.m.<br>• Last day to withdraw from the University with a WI grade by 5 p.m. |
| August 13 | Classes End. |
| August 17 | Grades Due. |
| August 19 | Grades Mailed to Students. |

*Calendar dates are subject to change. Please contact appropriate offices for verification and updates

**Grades will not be posted on transcripts, and graduation will not be processed until the end of the Complete Summer Term, August 13.

# General Information

## State Board of Education

| | |
|---|---|
| Lawton Chiles | *Governor* |
| Jim Smith | *Secretary of State* |
| Robert Butterworth | *Attorney General* |
| Gerald Lewis | *Comptroller* |
| Bob Crawford | *Commissioner of Agriculture* |
| Betty Castor | *Commissioner of Education* |
| Tom Gallagher | *Treasurer* |

## Florida Board of Regents

| | |
|---|---|
| Hon. Charles B. Edwards, Sr. | *Chairman, Fort Myers* |
| Hon. J. Clint Brown | *Vice Chairman, Tampa* |
| Hon. DuBose Ausley | *Tallahassee* |
| Hon. Betty Castor | *Commissioner of Education* |
| Hon. Alec P. Courtelis | *Miami* |
| Hon. Robert A. Dressler | *Fort Lauderdale* |
| Hon. Pat N. Groner | *Pensacola* |
| Hon. Perla Hantman | *Miami Lakes* |
| Hon. Cecil B. Keene | *St. Petersburg* |
| Hon. Thomas P. Petway III | *Jacksonville* |
| Hon. Carolyn K. Roberts | *Ocala* |
| Hon. Joan D. Ruffier | *Orlando* |
| Hon. Ross A. Wolf | *Student Regent* |
| Hon. Charles B. Reed | *Chancellor, State University System* |

## University Officials

| | |
|---|---|
| Modesto A. Maidique | *President* |
| James A. Mau | *Acting Provost and Vice President for Academic Affairs* |
| Richard J. Correnti | *Vice President for Student Affairs* |
| Paul D. Gallagher | *Vice President for North Miami Campus* |
| Michael P. Morgan | *Vice President for University Relations and Development* |
| Leonardo Rodriguez | *Vice President for Business and Finance* |

## History

Florida International University, a member institution of the State University System of Florida, was established by the State Legislature on June 22, 1965. Classes began at University Park on September 19, 1972, with 6,000 students enrolled in upper-division undergraduate and graduate programs. In 1981 the University added lower-division classes for freshmen and sophomores, expanding its enrollment capacity. In 1984, the University received authority to begin offering degree programs at the doctoral level; these programs received Level IV accreditation from the Southern Association of Colleges and Schools (SACS) in 1986.

The Florida Board of Regents appointed Charles E. Perry as the first president of FIU in July of 1969. He was succeeded in June, 1976 by President Harold Brian Crosby. Gregory Baker Wolfe was named the third president in February, 1979. Modesto A. (Mitch) Maidique was named the fourth President of Florida International University on August 27, 1986. Maidique received his Ph.D. in Electrical Engineering from the Massachusetts Institute of Technology and was associated with MIT, Harvard, and Stanford for 20 years.

## Goals

Florida International University (FIU), a comprehensive, multi-campus urban research institution, is committed to providing both excellence and access to all qualified students desiring to pursue higher education. FIU offers a comprehensive undergraduate liberal arts education structured around a rigorous core curriculum. The University also offers a number of highly-regarded master's and doctoral programs in six of its colleges and schools.

The University's academic programs are designed to achieve four major goals:

1. To provide an excellent university education for all qualified students, challenging and stimulating them at the lower-division level and preparing them to choose a major field in the upper division, leading to selection of a profession or occupation or further study at the graduate level. FIU encourages its graduates, as educated citizens, to pursue lifetime opportunities to contribute to the development of their community's cultural, aesthetic, and economic environments through participation.

2. To generate new knowledge through a vigorous and ambitious commitment to research in all academic disciplines and to encourage creativity by fostering an atmosphere conducive to the expression of ideas, artistic development, and communication with the external community.

3. To serve the university's external community, with special attention to Dade, Broward, and Monroe counties, enhancing South Florida's capacity to meet its cultural, economic, social and urban challenges as we move into the 21st century.

4. To foster greater global understanding as a major center of international education for the people of the Americas and the international community.

## Campuses

The University operates two campuses in Dade County and two educational centers in Ft. Lauderdale. The main campus is located at University Park in west Dade County, approximately 10 miles west of downtown Miami. The North Miami Campus is adjacent to Biscayne Bay, at Northwest Biscayne Boulevard and 151st Street. Broward County area is served cooperatively by the FAU/FIU Center, located on the campus of Broward Community College in Davie and at University Tower in Fort Lauderdale.

## University Park

The University Park has ten major buildings including a recently completed $12 million Engineering building, a $16 million Chemistry and Physics building, a $7 million College of Business Administration Building (under construction), and a $10 million Student Center expansion. The campus development plan envision four major expansion phases to the Library building, planned as a fourteenstory tower, beginning with the $11 million base construction in 1992; a $10 million Arts Complex to be completed in 1993; a $3 million Baseball Stadium Complex to be completed in 1993; a Student Health/Wellness Services building to be completed in 1992 Labor Studies building to be completed in 1993, a Nautilus/Fitness Center to be completed in 1992; a Biology Greenhouse and Conservatory to be completed in 1993; and major campus infrastructure improvements, including a new major campus entrancemall for Tamiami Trail access, scheduled for completion in late 1991.

## North Miami Campus

The North Miami Campus encompasses 200 acres on Biscayne Bay, including a large natural cypress preserve. Campus facilities include six campus buildings, an Olympicstandard Aquatic Center, apartmentstyle housing for ~52 students, and the Library with a capacity of 500 seats, 232,000 volumes, classrooms, a modern foreign language laboratory and an instructional media laboratory. A $4 million remodeling was recently completed to accommodate the growing Hospitality Management program, including a 250 seat auditorium, a restaurant, lecture demonstration labs and multipurpose commercial kitchens. Future development plans envision a $2 million project to complete classroom and lab space in the Hospitality Management building; a new $9 million Public

Affairs/Journalism building; and a new $11 million Community Conference Center.

### FIU Broward

In collaboration with Florida Atlantic University and Broward Community College, FIU faculty and administrators are working to provide a comprehensive urban university presence in Broward County. Both FIU Broward facilities are staffed to provide student services including admissions, registration, financial aid, academic advising, student activities, and career counseling.

The University offers full degree programs and a variety of supplementary courses at two major academic sites in Broward County.

The FIU Broward Program, located in Davie emphasizes undergraduate programs in cooperation with Broward Community College. Under the 2+2 program, students enroll in BCC for the first two years of university study and FIU provides the final two years and awards the bachelor's degree to graduates. The University Tower, in downtown Fort Lauderdale, serves as the administrative headquarters for the FIU Broward programs and as a major instructional facility. The University Tower is primarily utilized to provide graduate programs, research and services to residents and businesses and service industries in the area.

## General Academic Information

Florida International University offers a variety of academic programs and courses at the bachelor's, master's, and doctorate degree levels which are designed to respond to the changing needs of the growing metropolitan areas of South Florida. Degree programs are offered in the College of Arts and Sciences, College of Business Administration, College of Education, College of Engineering and Design, College of Health, School of Hospitality Management, School of Nursing, and School of Public Affairs and Services.

## Accreditation and Memberships

All academic programs of the University are approved by the State Board of Education and the Florida Board of Regents. The University is an accredited member of the Southern Association of Colleges and Schools. The professional programs of the respective schools of the University are accredited or approved by the appropriate professional associations, or are pursuing full professional accreditation or approval.

The University is also an affiliate member of the Association of Upper Level Colleges and Universities, the American Association of State Colleges and Universities, the Florida Association of Colleges and Universities, the American Association of Community and Junior Colleges, a Charter Member of the Southeast Florida Educational Consortium, and numerous other educational and professional associations.

The following agencies have accredited professional programs at the University:

Accreditation Board for Engineering and Technology

American Assembly of Collegiate Schools of Business

American Association of Colleges of Teacher Education

American Chemical Society

American Council for Construction Education

Council of Graduate Schools in the United States

Florida Consortium on Multilingual and Multicultural Education

National Accrediting Agency for Clinical Laboratory Sciences

National Association of Colleges of Nursing

National Association of Schools of Public Affairs

National League of Nursing

The Accreditation Board of Engineering and Technology

The American Dietetics Association

The American Medical Association

The American Medical Record Association

The American Occupational Therapy Association

The American Physical Therapy Association

The American Society of Clinical Pathologists

The Council on Social Work Education

## Southeast Florida Educational Consortium

Florida International University, Broward Community College, and Miami-Dade Community College are charter members of the Southeast Florida Educational Consortium, which was established in 1977. This organization links the member institutions in planning, maintaining, and evaluating cooperative efforts in academic programs, student services, and administrative support services.

The overall objectives of the Consortium are to:

1. Increase and improve educational opportunities.

2. Ensure smooth transition from the community college to the university.

3. Provide easy access to institutional services for students and faculty.

4. Effectively utilize human and fiscal resources.

Descriptions of specific cooperative arrangements between the Consortium member campuses and student and faculty procedures are given in the appropriate sections of this Catalog.

## New World School of the Arts

The New World School of the Arts, South Florida's public high school and college of visual and performing arts, is located in downtown Miami. Guided by practicing artists and experienced arts educators, talented students selected by audition prepare for professional careers in dance, music, theater and visual arts.

The New World School of the Arts is a collaborative venture of Dade County Public Schools, Miami-Dade Community College and Florida International University. The college program leads to a Bachelor of Fine Arts in Art or Theater or a Bachelor of Music degree in the College of Arts and Sciences at Florida International University.

## Academic Programs

### College of Arts and Sciences

**Bachelor of Arts in**
Chemistry
Economics
English
Environmental Studies
French
Geology
German
History
Humanities
International Relations
Liberal Studies
Philosophy
Political Science
Portuguese
Psychology
Religious Studies
Sociology/Anthropology
Spanish

**Bachelor of Science in**
Biological Science
Chemistry
Communication
Computer Science
Environmental Studies
Geology
Mathematics
Mathematical Sciences
Physics
Statistics

**Bachelor of Music**

**Bachelor of Fine Arts in**
Art
Theatre

**College of Business Administration**

**Bachelor of Accounting**

**Bachelor of Business Administration with majors in**
Finance
International Business
Management
Management Information Systems
Marketing
Personnel Management

**College of Education**

**Bachelor of Science in**
Art Education
Biology Education
Business Education
Chemistry Education
Elementary Education
English Education
History Education
Health Occupations Education
Home Economics Education
Mathematics Education
Modern Languages Education (majors in French, German, and Spanish)
Music Education
Parks and Recreation Management
Physical Education
Social Studies Education
Special Education (majors in Emotional Disturbance, Mental Retardation, and Specific Learning Disabilities)
Technology Education
Vocational Education (majors in Technical Education and Vocational Industrial Education)

**College of Engineering and Design**

**Bachelor of Science in**
Apparel Management
Architectural Technology
Civil Engineering
Computer Engineering
Construction Management
Electrical Engineering
Industrial Engineering
Interior Design
Mechanical Engineering

**College of Health**

**Bachelor of Science in**
Dietetics and Nutrition
Medical Record Administration
Medical Technology
Physical Therapy
Occupational Therapy
Prosthetics and Orthotics

**School of Hospitality Management**

**Bachelor of Science in Hospitality Management**

**School of Nursing**

**Bachelor of Science in Nursing**

**School of Public Affairs and Services**

**Bachelor of Science in**
Criminal Justice
Social Work

**Bachelor of Health Services Administration**

**Bachelor of Public Administration**

## North Miami Campus Programs

**College of Arts and Sciences**

**Bachelor of Arts in:**
English
Humanities
International Relations
Political Science
Psychology
Sociology/Anthropology

**Bachelor of Science in:**
Communication

**Master of Fine Arts in:**
Creative Writing

**College of Business Administration**

**Bachelor of Business Administration with majors in:**
Management
Marketing

**College of Education**

All College of Education programs are available. Please contact the College for additional information.

**College of Health**

**Bachelor of Science in:**
Medical Record Administration

**School of Hospitality Management**

**Bachelor of Science in Hospitality Management**

**School of Nursing**

**Bachelor of Science in Nursing**

**School of Public Affairs and Services**

**Bachelor of Science in**
Criminal Justice
Social Work

**Bachelor of Health Services Administration**

**Bachelor of Public Administration**

## Broward County Programs

**College of Business Administration**

**Bachelor of Accounting** - (BC)

**Bachelor of Business Administration with a major in:**
Finance

**College of Education**

**Bachelor of Science in Elementary Education** (BC)
Courses for Teacher Certification (BC)
Courses in Vocational Education (BC)

**College of Engineering and Design**

**Bachelor of Science in Construction Management** (BC)
Courses in Civil Engineering (BC)

**School of Hospitality Management**

**Bachelor of Science in Hospitality Management** - (BC)

**School of Nursing**

**Bachelor of Science in Nursing** (BC)

**School of Public Affairs and Services**

**Bachelor of Health Services Administration** - (BC)

**Primary Location:**

**BC** = Broward Program - Davie

**UT** = University Tower - Fort Lauderdale

In addition to the degree programs, a variety of support courses are offered from the College of Arts and Sciences.

## New World School of the Arts Programs

**College of Arts and Sciences**

**Bachelor of Fine Arts in**
Art
Theatre

**Bachelor of Music**

## Minors

A minor program is an arrangement of courses enabling a student to develop a degree of expertise and knowledge in an area of study in addition to his or her major academic program of study.

To receive a minor, a student must also complete the requirements for a baccalaureate degree from the University. A minor is not interdisciplinary.

### College of Arts and Sciences

Advertising
Art History
Biology
Broadcasting
Chemistry
Computer Science
Dance
Economics
English
French Language and Culture
General Translation Studies
Geology
Geography
History
Humanities
International Relations
Journalism
Mass Communication
Mathematical Sciences
Mathematics
Music
Philosophy
Physics
Political Science
Portuguese
Psychology
Public Relations
Religious Studies
Sociology/Anthropology
Spanish Language and Culture
Statistics
Theatre
Visual Arts

### College of Engineering and Design

Retailing Management

### College of Health

Medical Laboratory Sciences
Nutrition

### School of Public Affairs and Services

Criminal Justice
Public Administration
Social Welfare

## Certificates

Certificate Programs are structured combinations of courses with a common base of interest from one or more disciplines into an area of concentration.

Successful completion of a Certificate Program is entered on the student's transcript and records. Two types of certificates are awarded:

#### Academic Certificate

Awarded by an academic unit to a student at the time of awarding a bachelor's degree; or upon completion of the appropriate coursework to a student who already has a bachelor's degree.

An academic certificate shall not be awarded to a student who does not possess either a bachelor's degree or does not complete a bachelor's degree program. An academic certificate is to be interdisciplinary in nature, to the greatest extent possible.

#### Professional Certificate

Awarded by an academic unit to an individual who completes the appropriate coursework in the area of concentration. The professional certificate does not need to be interdisciplinary or associated with a degree program.

For details and course requirements, refer to the appropriate section in each College or School.

### College of Arts and Sciences

**Academic Certificates in**
Actuarial Studies
American Studies
Consumer Affairs
Environmental Studies
Ethnic Studies
Gerontological Studies
International Studies
Labor Studies
Latin American and Caribbean Studies
Linguistic Studies
Western Social and Political Thought
Women's Studies

**Professional Certificates in:**
Labor Studies and Labor Relations
Legal Translation and Court Interpreting
Student Media Advising
Translation Studies
Tropical Commercial Botany

### College of Business Administration

Banking
International Bank Management
International Business
Marketing

### College of Education

The College offers a variety of Professional Certificate and Add-On Teacher Certification programs. Refer to the College of Education program listing section.

### College of Engineering and Design

**Professional Certificates in**
Advanced Apparel Design
Apparel Production Management
Retailing Management
Heating, Ventilation, and A/C Design
Industrial and Labor Relations
Industrial Safety Production and Manufacturing

### College of Health

Medical Record Coding
Occupational Therapy
Prosthetics and Orthotics

### School of Hospitality Management

Hotel Management
Restaurant Management
Travel and Tourism Management

### School of Nursing

**Professional Certificate in**
Advanced Nursing Practice in Adult Health

### School of Public Affairs and Services

**Academic Certificate**
Law and Criminal Justice

**Professional Certificates in**
Development Administration and Management
Gerontology
Human Resource Policy Management
Justice Administration and Policy Making
Public Management
Public Personnel Management and Labor Relations

# Office of Admissions

Florida International University encourages applications from qualified applicants without regard to sex, physical handicap, cultural, racial, religious, or ethnic background or association.

## Application Process

As part of the State University System (SUS) of Florida, FIU uses the common application form for undergraduates. The application and other related information can be requested from the Office of Admission, PC 140, University Park, Miami, Florida 33199, or on the North Miami Campus, ACI-160, North Miami, Florida 33181. In Broward, contact the Broward Program, Whiddon Hall, Building 9, room 226, 3501 S.W. Davie Road, Davie, Florida 33314, (305)348-2363.

Applicants who are attending Florida high schools or a Florida community college may obtain the application form in school guidance offices.

A 15.00 U.S. dollars non-refundable application fee must accompany the completed application form. In addition, the following supporting credentials are required:

### Freshman Applicants

1. Official secondary school transcripts and appropriate test scores: Scholastic Aptitude Test (SAT) or the American College Test (ACT)/Enhanced American College Test (EACT). All offi-

cial transcripts, test scores, and any other required credentials must be received directly from the issuing agencies. It is the applicant's responsibility to initiate the request for credentials to the issuing agencies and to assure their receipt by the Office of Admissions.

2. Proof of graduation from an accredited secondary school must be submitted.

3. Nineteen academic units in college preparatory courses are required as follows:

| | |
|---|---|
| English | 4 |
| Mathematics | 3 |
| Natural Science | 3 |
| Social Science | 3 |
| Foreign Language | 2 |
| Academic Electives[1] | 4 |

[1]Academic Electives are from the fields of mathematics, English, natural science, social science, and a foreign language. Two units in the same foreign language are required. The academic grade point average will be computed only on the units listed above. Grades in honors courses, International Baccalaureate, and advanced placement (AP) courses will be given additional weight.

Freshmen admission decisions are made based on the student's strong academic preparation and commeasurate standardized test scores. Competition for places in the freshmen class is created by the quality and extent of the applicant pool.

Applicants who do not meet the above criteria will be reviewed by the Admissions Review Committee. Those who show potential in areas not easily evaluated by standardized tests can be considered for admission under the exception rule.

## Transfer Applicants

Degree seeking applicants with fewer than 60 semester hours of transfer credits must meet the same requirements as beginning freshmen. In addition, they must demonstrate satisfactory performance in their college work.

Applicants who have completed the Associate in Arts or Science (A.A. or A.S.) degree at a Florida public community college or have earned 60 transferable semester hours in a regionally accredited institution with a GPA of at least a 2.0, are eligible for admission to FIU. Undergraduates seeking entrance to a limited access degree program must meet special program requirements in addition to the University's entrance requirements. Refer to your proposed program of study section in this catalog for specific requirements.

Applicants who meet the above admissions requirements, but have not completed the general education requirements, or the prerequisites of their proposed major, may complete this college work at FIU, or at any other accredited institution. Students may also fulfill general education requirements through the College Level Examination Program (CLEP).

Official transcripts from all previous post secondary institutions must be forwarded to the Office of Admissions. Students are responsible to initiate this request.

Applicants transferring from a Florida Community College or University are required to take the College Level Academic Skills Test (CLAST) at their present institution. All transfer applicants to the upper division must present a passing score on the CLAST. All other upper division transfers must participate in the Pre-CLAST testing program during their first term of enrollment.

Transfer applicants from a state community college are encouraged to review the current edition of FIU's transfer student counseling manual available in all of Florida's community colleges counseling offices. The manual gives specific information regarding admissions to all of our undergraduate programs.

All students seeking admission to the University regardless of whether the student holds an A.A., must have completed two years of credit in one foreign language at the high school level or 8-10 credits in one foreign language at the college level (American Sign Language is acceptable). If a student is admitted to the University without this requirement, the credits must be completed prior to admission to the upper division.

a. Students who can demonstrate continuous enrollment in a degree program at an SUS institution or Florida Community College since Fall Term, 1989 (continuous enrollment is defined by the state to be the completion of at least one course per year) can be exempt from this requirement.

b. Students holding an A.A. degree from a Florida Community College or SUS institution prior to Fall Term, 1989 will also be exempt.

Applicants whose native language is not English and have not taken any college level English courses, must present a minimum score of 500 in the Test of English as a Foreign Language (TOEFL).

Admissions decisions will not be made before a completed application and all supporting documents are on file in the Office of Admissions.

Applications are kept on file for one year from the anticipated entrance date.

All credentials and documents submitted to the office of Admissions become the property of Florida International University. Originals or copies of the originals will not be returned to the applicant or forwarded to another institution, agency or person.

Admissions to the University is a selective process and satisfying the general requirements does not guarantee acceptance.

## Limited Access Program

A limited access program utilizes selective admission to limit program enrollment. Limited access status is justified where student demand exceeds available resources, such as faculty, instructional facilities, equipment or specific accrediting requirements. Criteria for selective admissions include indicators of ability, performance, creativity or talent to complete required work within the program. Florida Community College transfer students with Associate in Arts degrees are given equal consideration with FIU students. Admissions to such programs are governed by the Articulation Agreement and the State of Florida Board of Regents rules.

The following programs have been designated as limited access:

Business Administration
Dietetics and Nutrition
Medical Technology
Nursing
Occupational Therapy
Physical Therapy

## Requirements for Admission to Undergraduate Teacher Education Programs

In the College of Education, all applicants for teacher education programs must score at or above the 40th percentile on a standardized college entrance test, (i.e., a total score of 840 or higher on the SAT, or a composite score of 17 or higher on the ACT or a composite score of 19 or higher on the EACT). It is possible for an applicant who fails to meet this criterion to appeal to the College of Education.

## Readmission

An admitted degree-seeking student who has not enrolled in any course at the University for one full academic year or more is eligible for readmission under the University and program regulations in effect at the time of readmission. Students must contact the Office of Admissions to apply for readmission.

## International Admissions: Undergraduate Admission Standards and Procedures

International student applicants must meet the admission requirements of the University as described in the previous sections and comply with the following:

### Academic Records

Appropriate official transcripts and their English translations validated by an official public translator, and all other appropriate credentials, must be forwarded to the Office of Admissions.

### Proficiency In English

Proficiency must be established if the native language is not English. The following is accepted: A minimum score of 500 on the TOEFL. For information, applicants should contact: TOEFL Program, Box 899, Princeton, New Jersey 08540, U.S.A.

### Declaration and Certification of Finances

Upon receipt of the application for admission, the Declaration and Certification of Finances will be mailed to the applicant. It must be completed and returned to the office before the Certificate of Eligibility (Form I-20A) is issued.

The University is required by immigration authorities to check carefully the financial resources of each applicant prior to issuing the Form I-20A. Therefore, it is important that applicants are aware of the cost of attending the University and have the necessary support funds for the period of enrollment. Applicants should refer to the Annual Estimate of Cost Chart.

The total funds available for the student for the first or second academic year, or both, must equal the total estimate of institutional costs and living expenses. All items in the Declaration and Certification of Finances must be accurately answered to avoid unnecessary delay in processing. This document must be received by the Office of Admissions two months prior to the anticipated entry date.

Refer to the Annual Estimate of Cost table for more information. A married student should plan on an additional $3,500 in costs to cover the living expenses of a spouse.

A couple with children should anticipate further yearly additional costs of no less than $1,800 for each child.

### Health Insurance

All international students are required to purchase and maintain health insurance coverage to help defray the costs in case of catastrophic medical emergency. Coverage must be adequate to provide for costs at U.S. hospitals, usually much higher than costs in many other parts of the world. The University has approved a plan which provides coverage of most expenses and which is adequate for the needs of most students; however, a student may select alternate coverage provided it meets minimal coverage requirements. A copy of the requirements for alternate policies is available from the Office of International Student Services. Compliance with the insurance regulation is required prior to registration.

### Application Deadlines

Please refer to the Academic Calendar for appropriate dates.

### Required Entrance Tests

Freshman applicants are required to submit the results of the Scholastic Aptitude Test (SAT) or the American College Test (ACT) or the Enhanced American College Test (EACT).

### Tuition

An international student is considered a non-resident and is assessed non-resident fees. Immigration regulations require an international student to attend school at least two semesters within an academic year. An undergraduate student is required to take a minimum of twelve credit hours per semester. A graduate student is required to take a minimum of 9 credit hours per semester. Please refer to the section on Student Fees and Student Accounts for more information.

### Full-Time Enrollment

Non-immigrant alien students in F-1 visa status are required by United States immigration regulations to be enrolled full-time, except for the summer terms, and to make satisfactory progress toward the degree program in each term; otherwise the immigration status may be jeopardized. Full-time enrollment is defined as enrollment every term in, a minimum of 12 semester hours (undergraduate), or nine semester hours (graduate).

The laws and regulations of the United States Department of Justice, Immigration and Naturalization Service state:

It is the student's responsibility to comply with all non-immigrant alien requirements as stated under the United States laws under Section 101(a)(15)(f)(i) of the Immigration and Nationality Act. The University is required to report to the Immigration Office any non-immigrant alien student who: (a) does not register at the University at the time expected; (b) does not carry a full course of study; and (c) terminates attendance.

Granting official Extension of Stay is dependent upon the student's achieving normal academic progress toward the degree requirements.

### Employment

An F-1 student may not be employed off-campus while attending the University unless permission has been granted by the U.S. Immigration and Naturalization Service. Normally, employment will not be permitted, especially during the student's first year of enrollment; but under very special circumstances, due to unexpected conditions or emergencies arising after the student's arrival, an international student may be recommended for a work permit. Adequate proof must be presented to the International Student Advisor to obtain the necessary recommendation. On-campus employment not exceeding 20 hours per week while school is in session is permitted.

*Note:* An international student will not be granted admission to the University until all academic and non-academic requirements have been met. Under no circumstances should a student come to the University without having received the official Letter of Admission and the I-20A Form. All correspondence and document submissions should be di-

### Annual Estimate of Costs for Undergraduate International Students

**Single Student** (30 sem hrs)

| | |
|---|---|
| Tuition and Fees[1] | $ 4568 |
| Maintenance[2] | $ 9300 |
| Books & Supplies | $ 750 |
| Medical Insurance[3] | $ 450 |
| Total | $ 15,068 |

[1]Tuition and fees are subject to change. Fees include the Student Health Fee ($24.50 per semester) and the Athletic Fee ($10.00 per semester). Amounts shown reflect 15 semester hours for undergraduate and 12 semester hours for graduate during Fall and Spring terms only.

[2]Maintenance is estimated at $775 per month to cover room, board, clothing, transportation, and incidentals. This cost is for 12 months.

[3]All international students are required to carry medical insurance.

rected to: Office of Admissions, Florida International University, PC 140, University Park, Miami, Florida 33199 U.S.A., telephone (305) 348-2363.

# Office of Undergraduate Studies

## Academic Advising Center

Academic advising of students with fewer than 48 semester hours of earned credit is the responsibility of the Academic Advising Center in the Office of Undergraduate Studies. When admitted to the University, the student will meet with an adviser who will help plan the student's academic program. At the completion of 24 semester hours of earned credits, the student can choose an intended major, and after 60 semester hours, a student should officially declare a major. Students with intended or declared majors will be advised by faculty members or professional advisers in their major department.

Before students are cleared to register for classes they are required to participate in personalized Peer Adviser sessions and advising sessions offered by the Advising Center.

Academic information is available in PC 115, University Park, and ACI-180, North Miami Campus.

## University Learning Center/Testing Office

### Freshman Placement

All freshmen entering the University are required to participate in a series of placement tests prior to advising and registration, conducted the semester before attending the University. The components of the Freshman Testing/Placement Program include computational skills and standards of written English. Optional placement examinations are offered in modern languages and trigonometry. Students passing the optional examinations may be exempted from prerequisite Core Curriculum courses.

Newly admitted sophomore transfer students with fewer than 48 credits who have not met the Core Curriculum requirements in mathematics or English must participate in the Freshman Testing/Placement Program and the advising sessions before they will be allowed to register for courses at the University. Sophomore transfer students subject to the Core Curriculum may exempt from the language requirement by passing the appropriate language placement exam.

### College Level Academic Skills Test (CLAST)

The State of Florida has developed a test of college level communication and computation skills. The test is called the College Level Academic Skills Test (CLAST). The Testing Center at the University is responsible for administering and processing the CLAST.

The CLAST is designed to test the communication and computation skills that are judged by state university and community college faculty to be associated with successful performance and progression through the baccalaureate levels. All students seeking a degree from a public community college or state university must take and pass all parts of the CLAST. This test is required by Florida statutes and rules of the State Board of Education.

The CLAST is administered once each semester and students are encouraged to participate in all pre-CLAST activities administered by the University Learning Center and the Testing Office during their first semester at the University. Students who do not take and pass CLAST will not be allowed to continue in upper division status in state universities in Florida. The CLAST requirements also apply to students transferring to state universities in Florida from private colleges in Florida and from out-of-state colleges.

Only admitted, degree-seeking students who have completed at least 18 semester hours or the equivalent, are eligible to sit for the CLAST.

Those taking the CLAST section of the Florida Teachers Certification Exam must register through the State of Florida Department of Education Teacher Certification Office. Information and Registration Bulletins may be obtained from FIU's College of Education in DM 253 or call 348-2721.

Effective Fall Term 1984, the State Board of Education established minimum CLAST score standards for the award of the Associate in Arts and for admission to upper division status in state universities in Florida. The adopted standards follow:

| Tests | Fall 1986 Scores | Fall 1989 Scores | Fall 1991 Scores |
|---|---|---|---|
| Reading | 270 | 295 | 295 |
| English Language Skills | 270 | 295 | 295 |
| Computation | 275 | 285 | 295 |
| Essay | 4 | 4 | 5 |

Since Fall Term 1984, students must pass all four sections of CLAST to receive the Associate in Arts degree. Students may be admitted to upper division status at a State of Florida university by passing at least three of the four sections of CLAST. However, students MUST pass the remaining section of CLAST by the time that they complete 96 college credits (includes all transfer credits and CLEP credit, etc.). Failure to pass the remaining section of CLAST will directly impact the student's eligibility to register for additional upper division courses at the University. Successful completion of CLAST is required for students to receive the baccalaureate degree from the University.

Any student who has taken a subtest of the CLAST at least four times and has not achieved a passing score, but has otherwise demonstrated proficiency in coursework in the same subject area, may petition the CLAST Waiver Committee to recommend a waiver from that particular subtest. A waiver may be recommended to the president upon majority vote of the committee. If a waiver for a given subtest is approved, the student's transcript shall include a statement that the student did not meet the requirements of the subtest waived and that a waiver was granted.

The CLAST, Freshman Testing/Placement program, institutional scholastic testing, and many national testing programs are coordinated by the Testing Office. The Testing Office of the University Learning Center is located in PC 315, University Park, 348-2441; and ACI-180, North Miami Campus, 940-5754.

### University Learning Center/Academic Assistance Labs

The Center is equipped to help students improve their academic skills. Included among these skills are reading comprehension, reading speed, editorial skills, writing mechanics, and writing improvement and math review. Special emphasis is given to those students who need or want assistance passing the College-Level Academic Skills Test (CLAST). The Learning Center is located in Trailer 6 on the west side of University Park, 348-2180, and in ACII-303 at North Miami, 940-5754.

# Core Curriculum Requirements

The Core Curriculum requirements apply to all students entering the University with fewer than 48 semester hours.

Students transferring with 48 semester hours or more may instead opt to fulfill the University's General Education Requirements. All students subject to the Core are informed of additional policies governing these requirements in mandatory academic advising sessions provided by the Academic Advising Center of the Office of Undergraduate Studies (University Park PC 115; North Miami Campus ACI-180):

**English Composition** (6 semester hours; 'C' or higher required)

| | |
|---|---|
| ENC 1101 | Freshman Composition (Required first semester) |
| ENC 1102 | Techniques of Interpretation (Prerequisite: ENC 1101 - required second semester) |

**Mathematics** (6 semester hours 'C' or higher required)

Entry-level Course:

| | |
|---|---|
| MAC 2132 | Pre-Calculus |
| | or |
| MGF 1202 | Finite Math |

**Additional Mathematics Course**

Qualified students may begin with a higher level mathematics course based upon Placement Test or AP scores. Satisfactory scores on the National AP Calculus exam will substitute for Calculus I only.

The additional mathematics course may be selected from CGS 2060, CGS 3403, and CGS 3420, and courses with prefixes COP, MAC, and STA.

**Social Sciences** (6 semester hours)

Students must select courses from two different Social Science areas:

**Anthropology:**

| | |
|---|---|
| ANT 2000 | Introduction to Anthropology |
| ANT 3409 | Anthropology of Contemporary Society |

**Economics:**

| | |
|---|---|
| ECO 2013 | Macro Principles |
| ECO 2023 | Micro Principles |

**International Relations:**

| | |
|---|---|
| INR 2001 | Introduction to International Relations |

**Political Science:**

| | |
|---|---|
| POS 2042 | American Government |
| POT 2002 | Introduction to Political Theory |

**Psychology:**

| | |
|---|---|
| PSY 2020 | Introduction to Psychology |

**Sociology:**

| | |
|---|---|
| SYG 2000 | Introduction to Sociology |
| SYG 3002 | The Basic Ideas of Sociology |

**Natural Sciences** (8 semester hours; students must select one course with lab from Biological Sciences and one course with lab from Physical Sciences)

**Biological Science with Laboratory** (4 semester hours):

| | |
|---|---|
| APB 1102C | Introductory Botany (4) |
| APB 2040 | Foundations of Human Physiology (3) |
| APB 2040L | Foundations of Human Physiology Lab (1) |
| APB 2170 | Introductory Microbiology (3) |
| APB 2170L | Introductory Microbiology Lab (1) |
| BSC 1010 | General Biology I (3) |
| BSC 1010L | General Biology I Lab (1) |
| BSC 1011 | General Biology II (3) |
| BSC 1011L | General Biology II Lab (1) |
| BSC 2023 | Human Biology (3) |
| BSC 2023L | Human Biology Lab (1) |
| OCB 2003 | Introductory Marine Biology (3) |
| OCB 2003L | Marine Biology Lab (1) |

**Physical Sciences with Laboratory** (4 semester hours):

| | |
|---|---|
| AST 2100 | Solar System Astronomy (3) |
| AST 2100L | Solar System Astronomy Lab (1) |
| AST 2201 | Stellar Astronomy (3) |
| AST 2201L | Stellar Astronomy Lab (1) |
| CHM 1032 | Chemistry and Society (3) |
| CHM 1032L | Chemistry and Society Lab (1) |
| CHM 1033 | Survey of Chemistry (3) |
| CHM 1033L | Survey of Chemistry Lab (1) |
| CHM 1045 | General Chemistry I (4) |
| CHM 1045L | General Chemistry I Lab (1) |
| GLY 1010 | Physical Geology (3) |
| GLY 1010L | Physical Geology Lab (1) |
| PHY 3048 | Physics with Calculus (5) |
| PHY 3048L | General Physics Lab (1) |
| PHY 3053 | Physics without Calculus (4) |

**Foreign Language Requirements**

Students must acquire or demonstrate (in the Foreign Language Placement Test) two-semester competency of any one foreign language. High school credit will not fulfill the Core Curriculum requirement.

| | |
|---|---|
| FRE 1120 | Basic French I |
| FRE 1121 | Basic French II |
| GRE 1120 | Classical Greek I |
| GRE 1121 | Classical Greek II |
| ITA 1120 | Italian I |
| ITA 1121 | Italian II |
| LAT 1120 | Latin I |
| LAT 1121 | Latin II |
| POR 1130 | Basic Portuguese I |
| POR 1131 | Basic Portuguese II |
| SPN 1120 | Spanish I |
| SPN 1121 | Spanish II |

Other languages such as Arabic, German, and Hebrew also are offered. The current schedule booklet indicates the courses offered by the Department of Modern Languages.

**Arts** (3 semester hours)

The Arts requirement may be satisfied by any one Core course selected from the following areas.

| | |
|---|---|
| HUM 3214 | Ancient Classical Culture and Civilization |
| HUM 3226 | Medieval and Renaissance Culture and Civilization |
| HUM 3233 | Renaissance and Baroque |
| HUM 3246 | The Enlightenment and the Modern World |
| HUM 3432 | The Roman World |
| HUM 3435 | The Medieval World |
| HUM 4431 | The Greek World |
| ENG 2012 | Approaches to Literature |
| MUH 1011 | Music Appreciation |
| MUH 2116 | Evolution of Jazz |
| THE 2000 | Theatre Appreciation |
| ARH 2050 | Art History I |
| ARH 2051 | Art History II |
| ARH 4470 | Contemporary Art |
| ARH 4710 | History of Photography |
| ART 1201C | 2D Design |
| ART 1203C | 3D Design |
| PGY 3410C | Photography |

**Historical Analysis** (3 semester hours; 'C' or higher required; students must select one course from the following; Prerequisite: ENC 1102)

| | |
|---|---|
| AMH 2015 | Historical Analysis: The American Revolution |
| AMH 2053 | Historical Analysis: Democracy in America |
| EUH 2000 | Historical Analysis: The Rise of Western Culture |
| EUH 2015 | Historical Analysis: Athens, Sparta, and the Peloponnesian War |
| EUH 2069 | Historical Analysis: The Russian Revolution |
| EUH 2074 | Historical Analysis: De Tocqueville and the French Revolution |
| EUH 2235 | Historical Analysis: The Romantic Tradition |
| LAH 2092 | Historical Analysis: The Latin Americans |

WOH 1001 Historical Analysis: World Civilization

**Philosophical Analysis** (3 semester hours; 'C' or higher required. Students must select one course from the following; Prerequisite: ENC 1102)

PHI 2011 Philosophical Analysis
REL 2011 Religion Analysis and Interpretation

**World Prospects and Issues** (3 semester hours; students must take one of the following after successfully completing 30 semester hours)

HUN 3191 World Nutrition
SSI 3240 World Prospects and Issues.

## General Education Requirements

The Board of Regents has defined the General Education Requirements to consist of 36 semester hours. The University requires that all undergraduate students complete the 36 semester hours before graduation. For students entering the University with at least 48 semester hours, the requirement consists of six semester hours each in the areas of humanities, mathematics, natural science, and social science; and 12 semester hours of the Writing Requirement.

Only courses from the following list can fulfill the General Education Requirements at the University:

### State Board of Education Rule 6A-10.30

The State of Florida requires all public community colleges and universities to include a specified amount of writing and mathematics in their curriculum to ensure that students have achieved substantial competency in these areas. This requirement must be fulfilled within the first two years of study.

### Writing Requirement

Students must successfully complete twelve hours of writing courses with a grade of 'C' or better. Six hours must be in composition. This requirement must be fulfilled by taking at least two English Department courses with an ENC prefix except ENC 1101 and ENC 1102. Students also must fulfill Rule 6A-10.30 by taking six additional hours in courses each of which requires at least 6,000 words of written work. Students may fulfill this requirement by taking additional courses in composition (ENC prefix), Historical Analysis, Philosophical Analysis, and/or Approaches to Literature (ENG 2012).

ENC 1137 Essay Writing
ENC 3200 Business Letter and Reports
ENC 3210 Technical Writing
ENC 3211 Report and Technical Writing
ENC 3301 Expository Writing
ENC 4240 Report Writing
ENC 4241 Scientific Writing

### Humanities

**Art:**

ARH 2050 Art History Survey I
ARH 2051 Art History Survey II
ART 1201C 2D Design
ART 1203C 3D Design
ART 3310C Drawing (A 1000-level art course will be substituted for this course)

**History:**

AMH 2015 Historical Analysis: The American Revolution
AMH 2053 Historical Analysis: Democracy in America
AMH 3100 American History, 1607-1850
AMH 3200 American History, 1850-Present
AMH 3317 America and the Movies
AMH 4560 History of Women in the U.S.
AMH 4570 Afro-American History
EUH 2015 Historical Analysis: Athens, Sparta,
EUH 2069 Historical Analysis: The Russian Revolution
EUH 2074 Historical Analysis: De Tocqueville and the French Revolution
EUH 2235 Romantic Tradition
HIS 3001 Introduction to History
LAH 2092 Historical Analysis: The Latin Americans
WOH 1001 Historical Analysis: World Civilization
WOH 3280 Women's History

**Humanities:**

AML 2011 Survey of American Literature I
AML 3022 Survey of American Literature II
AML 3271 Afro American Literature
ENG 2012 Approaches to Literature
ENG 2100 Introduction to Film
ENG 3138 The Movies
ENG 4121 History of Film
ENG 4132 Studies of Film
ENL 2012 Survey of British Literature I
ENL 2022 Survey of British Literature II
HUM 3214 Ancient Classical Culture
HUM 3226 Medieval and Renaissance Culture and Civilization
HUM 3246 The Enlightenment and the Modern World
HUM 3233 Renaissance and Baroque
HUM 3302 Perspectives of the Humanities
HUM 3304 Values in Conflict
HUM 3306 History of Ideas
HUM 3432 The Roman World
HUM 3435 The Medieval World
HUM 3512 Art and Society
HUM 3872 Perspectives of the Humanities
HUM 3891 Perspectives of the Humanities
HUM 3813 Applied Humanities
HUM 3941 Applied Humanities
HUM 4392 Human Concerns
HUM 4406 Film and the Humanities
HUM 4431 The Greek World
HUM 4450 Cultural Heritages and Cultural Changes
HUM 4491 Cultural Heritages and Cultural Changes
HUM 4542 Human Concerns
HUM 4543 Literature and Philosophy
HUM 4544 Literature and the Humanities
HUM 4561 Ethics and the Humanities
HUM 4555 Symbols and Myths
HUM 5311 Art and Literature
LIN 2002 Introduction to Language
LIT 2010 Introduction to Fiction
LIT 2030 Introduction to Poetry
LIT 2040 Introduction to Drama
LIT 2110 World Literature I
LIT 2120 World Literature II
LIT 3200 Themes in Literature
LIT 3383 Women in Literature

**Liberal Studies:**

LBS 4692 Women in the Labor Movement

**Modern Languages:**

FRE 3500 Civilization I
FRE 4501 Civilization II
FRW 3200 Introduction to Literature
FRW 3520 Prose and Society
POR 3500 Luso-Brazilian Culture
SPN 4500 Culture I (Spain)
SPN 3520 Spanish American Culture
SPW 3820 Introduction to Literature

In addition, all elementary, intermediate, and advanced language courses.

**Music:**

MUH 1011 Music Appreciation

MUH 3116 Evolution of Jazz
MUH 3211 Music History Survey
MUH 3212 Music History Survey
MUH 3372 Twentieth Century Music: Exploration

**Philosophy:**
PHI 2011 Philosophical Analysis
PHH 3100 Ancient Philosophy
PHH 3200 Medieval Philosophy
PHH 3420 Early Modern Philosophy
PHH 3440 Late Modern Philosophy
PHH 4600 Twentieth Century Philosophy
PHI 2100 Introduction to Logic
PHI 3500 Metaphysics
PHI 3600 Ethics
PHI 3762 Eastern Philosophical and Religious Thought
PHM 3200 Social and Political Philosophy

**Religious Studies:**
REL 3100 Religion and Culture
REL 3172 Religion and Ethics
REL 3131 American Sects and Cults
REL 3300 Religions of the World

**Theatre:**
ORI 3000 Basic Oral Interpretation
THE 2020 Introduction to Theatre
PGY 3020 Introduction to Film-Making
THE 4110 Theatre History I
THE 4111 Theatre History II
THE 4370 Modern Dramatic Literature
TPP 3100 Introduction to Acting
SPC 2600 Public Speaking

**Mathematics**

(Must be at or above College Algebra level; one course may be in a Computer Science programming course.) A grade of 'C' or higher shall be considered successful completion of this requirement.

Students subject to Rule 6A.10.30 need six credits of mathematics, three of which can be a computer programming or statistics course. Students who matriculated prior to 1983 need only three credits of mathematics, but they must be in a mathematics course.

CGS 2060 Introduction to Microcomputers
CGS 3403 COBOL for Non-Computer Science Majors
CGS 3420 Programming for Engineers
COP 2172 Programming in Basic
MAC 2132 Pre-Calculus
MAC 3233 Business Calculus
MAC 3311 Calculus I
MAC 3312 Calculus II
MGF 1202 Finite Mathematics
STA 3013 Statistics for Social Sciences
STA 3122 Introduction to Statistics
STA 3132 Business Statistics
STA 3163 Statistical Methods
QMB 3150 Application of Quantitative Methods in Business

**Natural Science**

**Biological Sciences:**
APB 1102C Introductory Botany
APB 2040 Foundations of Human Physiology
APB 2040L Foundations of Human Physiology Laboratory
APB 2170 Introductory Microbiology
APB 2170L Introductory Microbiology Laboratory
APB 3253 Human Sexual Biology
BSC 1010 General Biology I
BSC 1010L General Biology I Laboratory
BSC 1011 General Biology II
BSC 1011L General Biology II Laboratory
BSC 2023 Human Biology
BSC 2023L Human Biology Laboratory
OCB 2003 Introductory Marine Biology
OCB 2003L Introductory Marine Biology Laboratory
PCB 2510 Issues in Genetics-recDNA and IQ

**Chemistry:**
CHM 1032 Chemistry and Society
CHM 1045 General Chemistry I
CHM 1046 General Chemistry II
CHM 3200 Survey of Organic Chemistry

**Dietetics and Nutrition:**
HUN 2201 Principles of Nutrition
HUN 3122 Nutrition and Culture

**Environmental Studies:**
EVR 3010 Energy Flow in Natural and Man-made Systems
EVR 3011 Environmental Resources and Pollution
EVR 3013C Ecology of South Florida
EVR 4311 Energy Resources

**Geology:**
GEO 3200 Physical Geography
GEO 3510 Earth Resources
GLY 1010 Physical Geology
GLY 1100 Historical Geology
GLY 4650 Paleobiology
OCE 3014 Physical Oceanography

**Physics:**
AST 2200 Modern Astronomy
AST 2200L Modern Astronomy Lab
AST 2201 Stellar Astronomy
AST 2201L Stellar Astronomy Lab
PHY 3048 Physics with Calculus
PHY 3048L Physics with Calculus Laboratory I
PHY 3049L Physics with Calculus Laboratory II
PHY 3054 Physics without Calculus II
PHY 3020 Concepts in Physics
PSC 3351 Earth Physics
PHY 3037 Frontiers of Physics

**Social Science**

**Anthropology:**
ANT 2000 Introduction to Anthropology

**Apparel Management:**
CHD 3220 Child Development: Infancy and Early Childhood
CHD 4210 Middle Childhood and Adolescent Development
FAD 3232 Relationships
FAD 2230 Family Life Cycle
FAD 4340 Family Development

**Criminal Justice:**
CCJ 3011 The Nature and Causes of Crime

**Economics:**
ECO 2013 Macro Principles
ECO 2023 Micro Principles

**International Relations:**
INR 2001 Introduction to International Relations
INR 3043 Population and Society
INR 3081 Issues and Problems in International Relations
GEA 3000 World Regional Geography
GEO 3471 Political Geography

**Political Science:**
POS 2042 American Government
POS 3044 Government and Politics of the U.S.

**Psychology:**
CLP 3003 Personal Adjustment
CLP 4144 Abnormal Psychology
CYP 3003 Introduction to Community Psychology
DEP 3000 Human Growth and Development

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| DEP 3001 | Psychology of Infancy and Childhood |
| DEP 3303 | Psychology of Adolescence |
| DEP 3402 | Psychology of Adulthood |
| DEP 4464 | Psychology of Aging |
| EAB 4794 | Principles and Theories of Behavior Modification |
| EXP 3304 | Motivation and Emotion |
| EXP 4605 | Cognitive Processes |
| INP 3002 | Introductory Industrial/Organizational Psychology |
| PPE 3003 | Theories of Personality |
| PSY 2020 | Introductory Psychology |
| SOP 3004 | Introductory Social Psychology |
| SOP 3015 | Social and Personality Development |
| SOP 3742 | Psychology of Women |
| SOP 3772 | Psychology of Sexual Behavior |
| SOP 3932 | Psychology of Drugs and Drug Abuse |
| SOP 4525 | Small Group Behavior |
| SOP 4645 | Consumer Psychology |
| SOP 4834 | Psychology of Health and Illness |

**Sociology:**

| | |
|---|---|
| SYG 2000 | Introduction to Sociology |
| SYG 3002 | Basic Ideas of Sociology |

## Additional Policies and Requirements

1. A student who has recently graduated from a Florida public community college with an Associate in Arts degree will have met the University's General Education Requirements.

2. A student who has recently met the General Education Requirements of any institution in the State University System of Florida will have met the University's General Education Requirements.

3. A student who has taken the freshman and sophomore years in an accredited college other than a Florida public community college or an institution in the State University System of Florida may receive credit for courses meeting the University's General Education Requirements.

4. A student may be admitted before completing an equivalent general education program, provided such a program is completed at the University prior to graduation.

5. Most departments require for admission to their degree programs certain freshman and sophomore courses in addition to the General Education Requirements. Applicants should consult the catalog section dealing with the program they which to pursue to determine the nature and extent of the additional requirements.

### Foreign Language Requirement

In addition to the above General Education Requirements, any student who was admitted with a foreign language deficiency must successfully complete 8-10 semester credits of instruction in one foreign language prior to graduation.

### Transfer Credit

For purposes of clarity, transferability refers to the conditions under which the University accepts credits from other post-secondary institutions. Applicability of credit toward a degree refers to the prerogative of the respective academic division to count specific credit toward a student's degree requirements. Normally, collegiate work will be considered for transfer credit only from post-secondary institutions which are fully accredited by a regional accrediting association. The Office of Admissions will evaluate the acceptability of total credits transferable to the University. Transfer credit will be applied as appropriate to a student's degree program. The authority to apply such credit to the degree rests with the academic division of the student's intended major. If a student chooses to transfer to another academic division within the University, credit previously earned at another post-secondary institution will be re-evaluated and applied as appropriate to the student's new degree program.

A maximum of 60 lower division semester hours taken at a two- or four-year institution may be counted toward a degree at the University. A maximum of 30 additional upper division semester hours taken at a senior institution may be counted toward a degree at the University.

Lower division courses in excess of 60 semester hours may serve to meet specific course requirements for an FIU degree but credit hours represented by these courses will not reduce the number of credit hours to be completed at the University.

A grade of 'D' will be accepted for transfer. However, such a grade in coursework in the major field is subject to review and approval by the appropriate academic department. Credit from institutions not fully accredited by a regional accrediting association will not be accepted; however, when presented, it will be considered on an individual basis by the appropriate College or School. Credit from military schools will be transferred in accordance with the recommendations of the American Council on Education. Credit from foreign institutions will be considered on an individual basis.

### Acceleration

The academic programs of the University are planned in such a manner that students may complete some of their division degree requirements through one or more of the mechanisms listed below. Specific information on the accelerated mechanisms utilized in each academic program is available from the department or program of the student's major.

### Credit For Non-College Learning

The award of credit for learning acquired outside the university or classroom experience is the prerogative of each academic department or program. Only degree-seeking students are eligible to receive this type of credit. The significant learning must be applicable to the degree program of the student, and should be discussed and appropriately documented at the time the desired program of study is initially discussed and decided with the student's program adviser.

### College Level Examination Program (CLEP)

The College Level Examination Program is designed to measure knowledge in certain subject matter areas of general education. There are two types of CLEP tests: General Examination and Subject Examination.

Because CLEP credit is regarded as transfer credit, no matter how earned, the maximum transferability of credit under CLEP, both General and Subject examinations combined, is 45 semester credits.

Not more than six semester hours will be transferred in each of the five areas of the General Examination (English, humanities, mathematics, natural sciences, social sciences/history). The English examination must be with essay and will not count towards the English Composition requirement. It will count as elective credit.

For additional information on CLEP, contact the Office of Admissions.

### Core Curriculum CLEP

The University awards credit for CLEP scores at the 50th percentile or higher. For students completing the Core requirements, only the following examinations will be recognized for credit. It is strongly recommended that CLEP examinations be taken prior to enrollment at the University.

### CLEP Subject Examinations

American Literature, Analysis and Interpretation of Literature, Calculus, English Literature, General Biology, General Chemistry, General Psychology, Introduction to Psychology, Introduction to Sociology, Macro Economics, Micro Economics, Modern Language.

### General Education CLEP

The University awards credit for CLEP scores at the 50th percentile or higher. For students entering with more than 48 semester hours, the following CLEP general examinations may meet the General Education requirements:

**English Composition with Essay:** A student will be awarded up to six semester hours of credit for English, less hours previously earned in any college-level English course. These credits will not count towards fulfilling the English Composition requirement.

**Humanities:** A student will be awarded up to six semester hours of credit if a satisfactory score is achieved.

**Mathematics:** A student will be awarded up to six semester hours of credit if a satisfactory score is achieved.

**Natural Science:** A student will be awarded up to three semester hours of credit in biology or physical science, or both, if a satisfactory score is achieved.

**Social Science:** A student will be awarded six semester hours of credit if a satisfactory score is achieved.

For additional information regarding the CLEP Subject Examinations, contact the Office of Admissions.

### Advanced Placement

The University awards credit for Advanced Placement test scores of three, four, and five. For students completing the Core requirements, only the following examinations will be recognized for credit.

**Advanced Placement:** Art History, Biology, Calculus, Chemistry, English, French Literature, Government, Modern Language, Music Listening and Literature, Music Theory, Physics, Spanish Literature.

## Faculty Scholars Scholarships

Outstanding entering freshmen are selected each year to receive Faculty Scholars Scholarship awards.

Scholarships are awarded solely on academic merit and are renewed each semester contingent upon the student's maintaining a minimum 3.3 GPA.

To meet the eligibility criteria, applicants must have:

1. Outstanding high school performance; a minimum academic average of 3.5 in a college preparatory curriculum for the 9th, 10th, 11th, and 12th grades.

2. A total score of 1200 on the SAT or a total score of 27 on the ACT.

For more detailed information, applicants should contact the Faculty Scholars Office, PC 115, University Park, 348-4100; or ACI-180, North Miami Campus, 940-5754.

## University Honors Program

The University Honors Program, a four year program, focuses on multicultural, interdisciplinary studies. The Honors Program is committed to curriculum integration in its approach to topics, resources and classroom practices. Every term the program will offer one three-credit honors course toward fulfillment of the eight semester program. In their senior year, honors students are given the option of completing a thesis/project in lieu of taking the two senior-year seminars.

Students will be selected to participate in the University Honors Program on the basis of SAT or ACT scores, grade point average, and an application essay. For further information, contact the University Honors Program, PC 115, (305) 348-4100.

## Traveling Scholar Program

The University participates in a traveling scholar program which enables a graduate student to take advantage of special resources, special course offerings, research opportunities, unique laboratories, and library collections available on another campus but not available on his or her own campus. Further information may be obtained from the Dean of the graduate program in which the student is enrolled.

## Pre-Medical Advisement

For their initial advisement, students interested in entering professional schools of medicine, dentistry, optometry, or veterinary medicine should contact either the Department of Biology, OE 246, 348-2201, or the Department of Chemistry, OE 200, 348-2606, at University Park at the earliest possible time. After completing a substantial portion of their professional courses or at the end of their junior year, and prior to the Fall Term in which they plan to apply to professional schools, students should contact the Chairperson of the Premedical Advisement and Evaluation Committee in the College of Arts and Sciences. The Committee provides additional advisement for students wishing to enter the health professions and prepares recommendations for those applying to professional schools.

## Pre-Law Advisement

Students interested in receiving information on pre-professional education, on application procedures, testing, and references should contact either the Department of Political Science in the College of Arts and Sciences or the Department of Criminal Justice in the School of Public Affairs and Services. A faculty adviser in either department will advise students who plan to attend law school.

# Office of Registration and Records

The Office of Registration and Records is responsible for directing the University Registration activities, including off-campus course registration, and establishing, maintaining, and releasing students' academic records. The office is also responsible for space and scheduling, Veteran's Affairs, and graduation.

The University Park office is located in PC 130, 348-2383, the North Miami Campus office is located in ACI-160, 940-5750, and the Broward Programs at Broward Community College, Central Campus, 475-4160 and University Tower, 355-5236.

## Classification of Students

The University classifies students as follows:

### Degree-Seeking Students

This category includes students who have been admitted to a degree program, but have not completed the requirements for it.

**Freshmen** - Students who have earned fewer than 30 semester hours.

**Sophomores** - Students who have earned at least 30 semester hours but fewer than 60 semester hours.

**Juniors** - Students who have earned at least 60 semester hours but fewer than 90 semester hours.

**Seniors** - Students who have earned 90 or more semester hours but who have not earned a baccalaureate degree.

### Non-Degree-Seeking Students

These students may be either affiliated or unaffiliated in their status. Unaffiliated students are limited to taking one semester of courses at the University. Affiliated students must be approved by the appropriate College or School and must meet its specific requirements. Under no circumstances may more than 15 hours, taken as a non-degree-seeking student, be applied toward graduation requirements at the University, if the student should change from non-degree-seeking to degree-seeking status.

The following regulations will apply to non-degree-seeking students:

1. Such students are not required to meet the usual admission requirements and are not officially admitted as regular students. Enrollment as a non-degree-seeking student does not imply a right for future admission as a regular, degree-seeking student. Credit earned will not be counted toward a degree at the University unless such students subsequently apply for regular admission and are accepted as undergraduate or graduate students.

2. Registration is permitted on a space-available basis and is determined at the time of registration. Non-degree-seeking students may not register during the official registration week for degree-seeking students.

3. No more than 15 undergraduate level semester hours earned as a non-degree-seeking student may be counted toward a degree. The appropriate Dean must approve the acceptance of such credit.

4. Non-degree-seeking students will not be allowed to register for more than one term without obtaining admission to a degree program at the University; obtaining admission into a formal Certificate Program; or acquiring affiliated status from the department in which they are registering.

5. Applicants denied admission to the University will not be allowed to register as non-degree-seeking students for a period of one year without obtaining admission into a formal Certificate Program or obtaining affiliated status from the appropriate academic department.

6. Immigration regulations prevent most foreign nationals from enrolling without being admitted into a formal degree or certificate program, depending on the visa type. Therefore, international students will not be permitted to enroll as non-degree-seeking students.

### Affiliated Students

Students applying for affiliated status as non-degree seeking students must be approved by the appropriate Dean's Office in accord with criteria approved by that College or School's Faculty Curriculum Committee.

### Transient Students

This category includes students who are fully admitted and are actively pursuing a degree at another accredited two or four year institution. Such students will need to present evidence of their status each semester before they will be allowed to register.

### Certificate Students

This category includes students who have been accepted into a specific certificate program by the academic department responsible for that program. Certificate programs are subject to all University regulations.

## College/Major Classification

Lower division students have a college designation of lower division with a major designation of their intended major (if indicated by the student). This does not imply subsequent admission to that degree program.

Degree-seeking upper division students admitted to an upper level degree program are classified according to the college or school and major of their degree program; and when applicable, to the college or school and major of their second major.

When admitted students reach a total of 60 or more credit hours (including transfer and current enrollment), they may apply for admission into an upper division major, provided they have passed the CLAST. All degree-seeking undergraduates must be admitted into an upper division major prior to completing 75 credit hours, including transfer hours.

Full-time course load: Undergraduate, 12 semester hours.

## Academic Degree Requirements

### Bachelor's Degree

The University will confer the bachelor's degree when the following conditions have been met:

1. Recommendation of the faculty of the College or the School awarding the degree.

2. Certification by the Dean of the College or the School concerned that all requirements of the degree being sought have been completed.

3. A minimum of 120 semester hours in acceptable coursework is required for the Bachelor's degree.

4. Completion of the last 30 credit hours at the University. Exceptions (normally not to exceed six hours) may be made in advance by the appropriate Dean.

5. Completion of the General Education Requirements or, in the case of students admitted with fewer than 48 transfer hours, the Lower Division Core Curriculum.

6. Earned a GPA of 2.0 or higher at the University.

7. The grade requirements for major, core courses, and course sequences established by the appropriate College or School.

8. Completion of the College Level Academic Skills Test (CLAST) requirement.

9. Completion of 8-10 credits in one foreign language (American Sign Language is acceptable). Students who entered the University with a foreign language requirement deficiency, regardless of whether the student holds an A.A., must now complete 8-10 credits in one foreign language. Of course, transfer credit is applicable to the requirement, and exemption by examination is available through the Testing Office. Also, students who completed two years of high school foreign language study in one language are considered to have met the requirement.

a. Exempt from this requirement is anyone who can demonstrate continuous enrollment in a degree program at an SUS institution or Florida Community College since Fall Term, 1989 (continuous enrollment is defined by the state to be the completion of at least one course per year).

b. Also exempt is anyone holding an A.A. degree from a Florida Community College or SUS institution prior to Fall Term, 1989.

### Two Bachelor Degrees

Two bachelor degrees may be awarded simultaneously when the following conditions have been met:

1. Requirements for two majors have been completed as certified by the appropriate academic units.

2. A minimum of 30 appropriate semester hours in addition to the requirements of one degree has been earned.

3. A graduate from an accredited four-year institution who applies for admission to work toward a second bachelor's degree must meet the requirements of the major department which shall include (but is not limited to) a minimum of 30 semester hours of coursework.

### Two Majors for a Bachelor's Degree

Any undergraduate student who elects to do so may carry two majors and work to fulfill the requirements of both concurrently. Upon successful completion of the requirements of two majors, the student will be awarded one degree and a notation denoting both majors will be entered on the transcript. A Request for Second Major Form must be filled out in the Office of Registration and Records to declare two majors.

### Minors and Certificate Programs

Students who have completed an approved minor as part of their baccalaureate degree program will have this notation as a part of the degree comment on their transcript.

Students who have completed an approved certificate program will have an appropriate notation placed on their transcript.

### Associate In Arts

Students who satisfactorily complete 60 semester hours of acceptable college work with an overall GPA of 2.0 or higher, fulfill the Lower Division Core requirements, the completion of the College Level Academic Skills test (CLAST) and complete at least 20 credit hours in residence at the University may apply for the Associate in Arts degree. The degree will not be awarded after completion of the baccalaureate degree. A notation will appear on the student's transcript but no diploma will be issued.

### Summer Enrollment

All students entering a university in the State University System with fewer than 60 credit hours shall be required to earn at least nine credit hours prior to graduation by attending one or more summer terms at a state university.

## Academic Definitions

### Program and Course Regulations

#### Credit Hour

The term "credit hour" as used refers to one hour of classwork or the equivalent each week for an entire academic term.

#### Major

An integral part of the bachelor's degree is a major concentration of coursework in an approved academic discipline or area. The exact course and credit requirements and prerequisites for each major are outlined in the departmental program areas in the Catalog.

#### Electives

Students may usually select courses from any academic area to complement their area or areas of study or to meet their interests in order to fulfill the credit hour requirements for the bachelor's or master's degree. Prerequisite course requirements should be considered in selecting elective courses. Students should refer to their academic program requirements concerning electives.

#### Minor Program

A minor program is an arrangement of courses that enables students to develop some degree of expertise in one area of study. A minor is awarded upon completion of the bachelor's degree, but is not interdisciplinary in nature.

#### Certificate Program

In the Colleges and Schools of the University, a certificate program is a combination of courses with a common base or interest selected from one or more academic disciplines and so arranged as to form an area of academic concentration. Three types of certificates are awarded: Academic, professional, and continuing studies. Students must apply and be admitted into the Professional certificate program.

#### Change of College/School or Major

A fully admitted undergraduate student can change majors, provided he or she meets the entrance requirements of the new program, by submitting a Request for Change of College/School or Major form. The form and instructions are available in the Office of Registration and Records. The student is subject to the program requirements in effect at the time of the change of major.

## Registration

The following registration information is subject to change and students must verify the dates with the Office of Registration and Records, PC 130, University Park; or ACI-160, North Miami Campus; or at the Broward Program, BCC Central Campus, 475-4160 and University Tower, 355-5236.

Registration for courses is as follows:

**Registration Week** is held during the preceding semester (check the Academic Calendar for the dates) and ends one week later. Degree seeking students are given an appointment day and time based on their classification, GPA, and credit hours completed. Students may add/drop at this time.

**Open Registration** is held following Registration Week and lasts for one week only. There is no appointment day and time and registration is on a first-come, first-serve basis. All students who have not yet registered are encouraged to do so at this time. Students who have already registered may add or drop courses during this period.

**Registration Day** is held prior to the beginning of the term and is for one day only. Students who have not registered should do so at this time to avoid a late registration fee. (Check the Academic Calendar for the date.)

All Students, degree and non-degree-seeking, registering for more that 18 credit hours during one semester must obtain the approval and the signature of the Dean of their College or School.

### Telephone Registration

All students are able to register, add and drop courses using a touchtone telephone. Students able to use this system are given a security access code and information on the Voice Response Telephone Registration system by the Office of Registration and Records.

### Immunization

To register for courses, students must provide the University Health Clinic (Tower Trailer University Park; TC 110, North Miami Campus) with documentation of immunization against measles and rubella. Students should contact the Health Clinic for more information at 348-3401 or at 940-5620.

### Late Registration Fee

Any student, degree-seeking or non-degree-seeking, who initiates registration after Registration Day is assessed a late registration fee. A student may initiate late registration during the first week of classes.

### Dropping and Adding Courses

The Official Drop/Add period runs throughout the first week of classes (Refer to the Academic Calendar for specific dates). During this period a student may add courses or register with a late registration fee. Students may also drop courses or withdraw from the University with no records kept of the courses and without a tuition fee liability. The student must submit a drop/add card to the Office of Registration and Records to officially drop a course. If the tuition fee has already been paid, the student must fill out a Refund Request Form with the Cashier's Office.

### Late Adds

Students may add courses with appropriate authorization and signatures until the end of the second week of classes. No course can be added after this deadline.

### Late Drops

Courses officially dropped after Drop/Add period and through the eighth week of the term (summer terms have different deadlines, please refer to calendar dates) are recorded on the student's transcript with a symbol of 'DR' (dropped). The student is financially liable for all dropped courses. The student must submit a Course Drop Form to the Office of Registration and Records to officially drop a course. *Non-attendance or non-payment of courses will not constitute a drop.*

A student may appeal the deadline for a late drop by submitting the Appeal for Late Drop form. A drop after the deadline will be approved only in cases where circumstances beyond the student's control make it impossible for the student to continue; the student must provide appropriate documentation. The instructor will designate whether the student was passing or failing the course at the time of the appeal to drop. The deadline to submit this appeal is the last day of classes of the term.

### Withdrawal from the University

A currently registered student can withdraw from the University only during the first eight weeks of the semester. In the Summer Semester, withdrawal deadlines will be adjusted accordingly. A Withdrawal Form must be filled out and submitted to the Office of Registration and Records. *Non-attendance or non-payment of courses will not constitute a drop.* (Refer to the Academic Calendar for the deadline dates.)

The transcript record of a student who withdraws before or during the Drop/Add period will contain no reference to the student being registered that semester and no tuition fee is assessed. If the tuition has already been paid, a Refund Request Form must be filled out with the Cashier's Office. If a student withdraws from the University prior to the end of the fourth week of classes, a 25 percent refund, less a bonding fee, will be made.

The transcript record of a student who officially withdraws after Drop/Add period and before the end of the eighth week of the term will contain a 'WI' for each course.

The transcript record of a student who stops attending the University without officially withdrawing from the University will contain an 'F' grade for each course.

A student may appeal the deadline for a late withdrawal by submitting the Appeal for Late Withdrawal form. A withdrawal after the deadline will be approved only in cases where circumstances beyond the student's control make it impossible for the student to continue. The student must submit appropriate documentation. The instructor will designate whether the student was passing or failing the course(s) at the time of the appeal to withdraw. The deadline to submit this appeal is the last day of classes or the term.

## Grading System

| Grades | | Grade Points Per Credit Hour |
|---|---|---|
| A | | 4.00 |
| A- | | 3.67 |
| B+ | | 3.33 |
| B | | 3.00 |
| B- | | 2.67 |
| C+ | | 2.33 |
| C | | 2.00 |
| C- | | 1.67 |
| D+ | | 1.33 |
| D | | 1.00 |
| D- | | 0.67 |
| F | Failure | 0.00 |
| P | Satisfactory (Pass) | N/A |
| IN | Incomplete[1] | N/A |
| WI | Withdrew from University | N/A |
| WP | Withdrew after deadline with passing grade | N/A |
| WF | Withdrew after deadline with failing grade | 0 |
| AU | Audit | N/A |
| DR | Dropped Course | N/A |
| DP | Dropped after deadline with passing grade | N/A |
| DF | Dropped after deadline with failing grade | 0 |
| NR | Grade Not Reported or Invalid[2] | N/A |
| EM | Examination | N/A |

[1]IN is only a temporary symbol. It will revert to the default grade after two terms.

[2]NR is only a temporary symbol. It will default to an 'F' after two terms if it is not changed by the instructor.

*Note:* All courses for which a student is officially registered at the end of the Drop/Add Period and on which a Letter Grade, a 'DF', or a 'WF' is received are calculated in the GPA.

### Grading Options

The Colleges and the Schools make the determination of the grading option of each course. A course may be offered for a letter grade as listed above or Pass/Fail; or for an optional grade in which the student has a choice of either receiving a letter grade or pass/fail; or the student may choose to audit a course and an 'AU' grade will be recorded on the student's records. The grading option must be indicated at the time of registration. The grading option cannot be changed after the Drop/Add period. There are no exceptions to this deadline.

To register for an audit, the student must obtain the permission and signature of the instructor of the course audited.

### Incomplete Grade

An incomplete grade is a temporary symbol given at the discretion of the instructor for work not completed because of serious interruption not caused by the student's own negligence. An incomplete must be made up within two semesters or it will automatically default to the grade that the student earned in the course. There is no extension of the two semester deadline. The student must not register again for the course to make up the incomplete.

### Forgiveness Policy

A forgiveness policy is a way in which a student may repeat a limited number of courses to improve his or her grade point average (GPA) by having only the grade received on the last repeat used in its calculation. Under the University's forgiveness policy, a student must file a Repeated Course Form with the Office of Registration and Records. The form must be submitted no later than one year after the semester in which the grade was received. All courses taken with the grades earned will be recorded on the student's transcript. The repeated course form will not be processed if the first or repeated grade received is 'DR', 'DP', 'WI', 'WP', 'AU', 'NR', or 'EM'. Repeated courses will be appropriately designated (T: attempted; R: last repeat).

Undergraduate students may take advantage of the forgiveness policy only four times for the purpose of improving the GPA. The same course may be repeated up to four times or the student may use the four opportunities to apply to four different courses. Only the final grade for the four courses repeated under the forgiveness policy will count in computing the student's GPA. The recalculation of the GPA is an internal University policy only, and one which may not be followed by other institutions and/or services. In order for a course to be considered as repeated and lead to the adjustment of the GPA, the course must be the same and must be repeated at

the University. Students who have used their four options under the forgiveness policy may still repeat courses. However, both the original grade and any additional grades received through repetitions of the course will be used in computing the GPA.

A course taken on a letter grade basis must be repeated on the same basis. A student will not be allowed additional credit or quality points for a repeated course unless the course is specifically designated as repeatable (independent study, studio courses, etc.). If a student is not using the forgiveness policy, he or she may still repeat a course. All attempts will apply to computation of the GPA but credit for one attempt will apply toward graduation. Students must check with the appropriate academic department to determine whether there are additional restrictions on repeating courses.

### Departmental Credit by Examination

Departmental credit by examination is available for certain courses. A student who has already gained knowledge of a subject offered at the University and who wishes to take an examination in lieu of taking the course should discuss the matter with his or her academic advisor and with the department offering the course.

Awarding departmental credit by examination is the prerogative of each academic unit. To receive credit by examination, a student must be a regular degree-seeking student, register, and pay for the courses in the regular manner. Once the student is awarded the Departmental Credit by Examination, an EM grade will be recorded on the transcript.

### Change or Correction of Grades

Once submitted, end-of-semester grades (except Incompletes and NR's, which default at the end of two terms) are final and are subject to change only through a Change of Grade Form to correct an error in computation or transcribing, or where part of the student's work has been unintentionally overlooked.

### Final Examinations

Final course examinations will be given during the week following the last day of classes during each semester. The Summer semesters do not have final examination periods and course examinations may be given at the discretion of the faculty member teaching the course.

### Grade Reports

At the end of each semester, the Office of Registration and Records mails each registered student a copy of his or her end of term grades.

### Dean's List

Any fully admitted undergraduate student who earns a semester average of 3.5 or higher on nine or more semester credit hours of coursework for which grade points are earned, is placed on the Semester Dean's List. This achievement is noted on the student's semester report of grades and permanent academic record (transcript).

## Application for Graduation

Each student who plans to graduate is required to submit to the Office of Registration and Records an Application for Graduation form. This form, supplied by the Office of Registration and Records, must be submitted before the end of the third week of classes of the academic semester in which graduation is expected. A student turning in the Application for Graduation after the deadline will graduate the following semester. There is no charge for applying for graduation. The Application for Graduation must be signed by the academic advisor prior to being submitted to the Office of Registration and Records.

A student denied graduation must complete the remaining requirements needed for graduation and must re-apply for graduation.

## Academic Honors

### Highest Honors

To graduate with Highest Honors, a student must have earned a cumulative GPA of 4.0.

### High Honors

To graduate with High Honors, a student must have earned a cumulative GPA between 3.75-3.999.

### Honors

To graduate with Honors, a student must have earned a cumulative GPA between 3.50-3.74.

To graduate with the above honors, the student must have completed forty semester hours at the University for which grade points are awarded.

## Academic Warning, Probation, and Dismissal

### Warning

A student whose cumulative GPA falls below a 2.0 (undergraduate) will be placed on warning, indicating academic difficulty.

### Probation

A student on warning whose cumulative GPA falls below 2.0 (undergraduate) will be placed on probation, indicating serious academic difficulty. The College/School of the student on probation may appropriately communicate conditions which must be met in order to continue to enroll.

### Dismissal

A student on Probation whose cumulative and semester GPAs fall below a 2.0 (undergraduate) will be automatically dismissed from his or her program and the University. An undergraduate student will not be dismissed prior to attempting a minimum of 20 semester hours of coursework. The student has ten working days to appeal the dismissal decision. This appeal must be made in writing to the Dean of the College or the School in which the student is admitted. The dismissal from the University is for a minimum of one year. After one year, the student may apply for readmission (see Readmission) to the University in the same or a different program, or register as a non-degree seeking student. *There are no exceptions to the one year waiting period.*

Dismissed students applying for admission or registering as non-degree seeking students are placed on academic probation.

## Student Records

Florida International University assures the confidentiality of student educational records in accordance with State University System rules, state, and federal laws including the Family Educational Rights and Privacy Act of 1974, as amended. Student academic records are maintained in the Office of Registration and Records and in the academic department of the student's major. As a rule, all currently enrolled and former students have the right to review their records to determine their content and accuracy. Parents of dependent students, as defined by the Internal Revenue Code, and who give evidence of the dependent status, have the same rights. For the cost of photocopying, students may generally have copies of any documents in their file, except for other institutions' transcripts.

## Release of Student Information from Educational Records

The disclosure or publication of student information is governed by policies of Florida International University and the Board of Regents of the State University System of Florida within the framework

of State and Federal Laws, including the Family Educational Rights and Privacy Act of 1974.

A student's consent is required for the disclosure or publication of any information which is a) personally identifiable and b) a part of the educational record. However, certain exceptions to that generality, both in types of information which can be disclosed and in access to that information, are allowed within the regulations of the Family Educational Rights and Privacy Act. The following persons and organizations may have access to personally identifiable information without a student's prior consent:

A. Faculty, administrators, staff and consultants employed by the University or the Board of Regents whose work involves:

1. Performance of administrative tasks which relate to students;

2. Performance of supervisory or instructional tasks which relate to students; or

3. Performance of services which benefit students.

A student's prior consent is not required for disclosure of portions of the educational record defined by the institution as Directory information. The following Directory Information may be released by the University:

1. Name, local and permanent address and telephone number(s);

2. Date and place of birth, and sex;

3. Classification and major and minor fields of study;

4. Participation in officially recognized activities and sports;

5. Weight and height of members of athletic teams;

6. Dates of attendance, degrees and awards received;

7. The most recent previous educational agency or institution attended by the student; and

8. Photographic image.

The information above, designated by the University as Directory Information, may be released or published by the University without a student's prior written consent unless exception is made in writing by the student or the parents of a dependent student.

In order to prevent access to or release of Directory Information, students, or the parents of dependent students, must notify the Registrar (PC 130), in writing, prior to the first class meeting day of the semester. Access to, or release of Directory Information will be withheld until further written instruction is received from a student, or the parents of a dependent student.

Students have a right to challenge the correctness of their educational records and may file written requests to amend these records. The Office of Registration and Records (PC 130) may be contacted for further information regarding the procedure to follow in filing complaints.

For complete information regarding the policies outlined above, please contact:

Registrar
Office Registration & Records
PC 130
Florida International University
University Park
Miami, Florida 33199

## Transcripts

The transcript is the complete student record of courses taken at the University, in addition to the number of transfer credits accepted. The GPA is calculated for all courses taken at the University after Fall Term 1975 whether the courses are in the major program or not. Once a baccalaureate, master's, or doctorate degree is earned, the GPA recalculation starts again.

A student must request his or her transcript in writing. There is a processing period. The transcript will not be released if the student has a University financial liability.

## Class Attendance

The University does not have an attendance policy. However, individual faculty may establish attendance criteria in classes where it is necessary for academic reasons. Academic units may establish their own attendance policies with the approval of the Provost.

## Veterans Information

The Office of Veterans Affairs assists all veterans and their dependents who wish to receive VA educational benefits. The Office also provides personal counseling, fee deferments, tutorial assistance, and work-study jobs. The VA Office is located in PC 130, University Park; and in ACI-160, North Miami Campus.

Veterans who are planning to attend the University should contact the Office of Veterans Affairs two months prior to the date of entry in order to expedite the processing of paperwork required to obtain educational allowances from the Veterans Administration.

**Training Status**

| | |
|---|---|
| Full time | 12 Credits |
| 3/4 time | 9 Credits |
| 1/2 time | 6 Credits |
| Less than 1/2 time | 5 Credits |

**Rate of Payments**
**Number of Dependents**

For rate of monthly payment of educational allowances for veterans and dependents, please contact Office of Veteran's Affairs.

For additional information regarding other Veterans Educational Programs, contact the Office of Veterans Affairs at University Park, PC 130, 348-2838.

## Status Certification

The Veterans Affairs Office also verifies the school status of all past and present students for purposes of Social Security, tuition reimbursement, employment, and loan deferrals.

## Enrollment Status

**Undergraduate:**

Full time: 12 credits or more.

Half time: 6 - 11 credits.

Less than half time: 5 credits or less.

The above enrollment status is for continuous enrollment for the semester that the student is attending. Reduction of course load will reflect the student's status. See certification office for further details.

# Florida Residency Information

## Florida Student Definition

For the purpose of assessing registration and tuition fees, a student shall be classified as a "Florida" or "non-Florida" Resident.

To qualify as a "Florida" Resident, the student must:

1. Be a U.S. Citizen, Resident Alien, parolee, Cuban National, Vietnamese Refugee, or other legal alien so designated by the U.S. Immigration and Naturalization Service.

2. Have established a legal residence in this State and have maintained that legal residence for twelve months immediately prior to the start of the term in which the student is seeking Florida resident classification. The student's residence in Florida must be as a bona fide domiciliary rather than for the purpose of maintaining a mere temporary residence or abode incident to enrollment in an institution of higher education, and should be demonstrated as indicated below (for dependent students as defined by IRS regulations, a parent or guardian must qualify).

3. Submit the following documentation (or in the case of a dependent student, the parent must submit documentation) prior to the last day of

registration for the term for which resident status is sought:

a. Documentation establishing legal residence in Florida (this document must be dated at least one year prior to the first day of classes of the term for which resident status is sought). The following documents will be considered in determining legal residence:

(1.) Declaration of Domicile

(2.) Proof of purchase of a home in Florida which the student occupies as his or her residence.

(3.) Proof that the student has maintained residence in the state for the preceding year (e.g., rent receipts, employment record).

b. Documentation establishing bona fide domicile in Florida which is not temporary or merely incident to enrollment in a Florida institution of higher education. The following documents will be considered evidence of domicile even though no one of these criteria, if taken alone, will be considered conclusive evidence of domicile (these documents must be dated at least one year prior to the first day of classes of the term for which resident status is sought):

(1.) Declaration of Domicile

(2.) Florida Voter's registration

(3.) Florida Driver's license

(4.) Proof of real property ownership in Florida (e.g., deed, tax receipts).

(5.) Employment records or other employment related documentation (e.g., W-2, paycheck receipts), other than for employment normally provided on a temporary basis to students or other temporary employment.

(6.) Proof of membership in or affiliation with community or state organizations or significant connections to the State.

(7.) Proof of continuous presence in Florida during the period when not enrolled as a student.

(8.) Proof of former domicile in Florida and maintenance of significant connections while absent.

(9.) Proof of reliance upon Florida sources of support.

(10.) Proof of domicile in Florida of family.

(11.) Proof of admission to a licensed practicing profession in Florida.

(12.) Proof of acceptance of permanent employment in Florida.

(13.) Proof of graduation from high school located in Florida.

(14.) Any other factors peculiar to the individual which tend to establish the necessary intent to make Florida a permanent home and that the individual is a bona fide Florida resident, including the age and general circumstances of the individual.

c. No contrary evidence establishing residence elsewhere.

d. Documentation of dependent/independent status (IRS return or affidavit)

A student can also qualify for "Florida" residency by one or more of the following criteria:

1. Become a legal resident and be married to a person who has been a legal resident for the required twelve-month period, or,

2. Be a member of the Armed Forces on active duty stationed in Florida, or a spouse or dependent, or,

3. Be a member of the full-time instructional or administrative staff of a state public school, state community college or state university in Florida, a spouse or dependent, or,

4. Be a dependent and have lived five years with an adult relative who has established legal residence in Florida, or,

5. Be a former student at a public institution of higher education who was properly classified as a resident who re-establishes domiciliary status and re-enrolls within a period of twelve months, or,

6. Make a statement as to the length of residence in Florida and qualification under the above criteria.

# Financial Aid

The University adheres to the philosophy that a student is entitled to a college education regardless of his or her financial condition. The Financial Aid Program at the University includes scholarships, grants, loans, and employment. Instructions on how to apply for financial aid are listed under Application Procedures for Financial Aid. The Financial Aid Office is located in PC 125, University Park, 348-2431; and in ACI-160, North Miami Campus, 940-5765.

## Grants and Scholarships

Grants and Scholarships are monetary gifts based on financial need or merit. Neither type of award requires work or repayment. For most Federal and State grants, students must demonstrate financial need to receive an award.

**Pell Grant:** This is a federal grant program designed to provide financial assistance to students pursuing their first undergraduate degree. The U.S. Department of Education evaluates the information reported on the application and determines the student's eligibility using a standard formula, passed into law by Congress. The Student Aid Report (SAR) is mailed to the student indicating eligibility status and index number. Students must bring or mail the SAR to the Financial Aid Office, even if denied a Pell Grant. The amount of the award will vary according to the student's enrollment category each term. The Financial Aid Office will determine the grant's dollar value (if any) and include it in the award letter.

(Refer to Eligibility Criteria section to determine eligibility requirements.)

**Supplemental Educational Opportunity Grant (SEOG):** This federal grant provides gift aid for a limited number of first-time undergraduate students. Awards range from $100 to $4,000 per year depending upon financial need.

(Refer to Eligibility Criteria section to determine eligibility requirements.)

**Florida Student Assistance Grant (FSAG):** The FSAG is a state grant which provides awards ranging from $200 to $1,500 per academic year for four years. The grant is available only to first-time undergraduate Florida residents who have resided in the state for at least 12 consecutive months, are citizens or permanent residents of the United States, and can demonstrate financial need.

To be considered, students must complete a Florida Financial Aid Form by the application deadline of April 15 for the following Fall term. The University selects recipients based on criteria established by the Florida Department of Education Office of Student Financial Aid. Award amounts are based on the student's financial need and availability of funds. Full-time enrollment is required each term to receive the grant.

**Florida Undergraduate Scholars (FUS):** This program is administered by the Florida Department of Education and provides scholarships to Florida high school graduates who have been bona fide residents of the state for one year preceding the receipt of the award and plan to attend a Florida college or university.

Applicants must be recognized by the National Merit Scholarship Corporation as scholars or finalists, or have attained a 3.5 GPA on an un-weighted 4.0 scale in high school, and score 1200 or higher on the SAT, or 28 on the ACT. Recipients must enroll as full-time students each term.

Initial year applications may be obtained through high school guidance counselors. Renewal applications are mailed to current recipients by the Flor-

ida Department of Education, Office of Student Financial Assistance.

## Loans

There are two basic types of loans: long-term and short-term or emergency loans. Long-term loans are low interest awards that must be repaid after the student is no longer enrolled in an institution of higher education. Short-term or emergency loans are awarded on a short term basis and do not carry any interest.

**Perkins Loan (formerly NDSL):** This is a federally funded loan in which undergraduate students are allowed to borrow a maximum of $9,000 for their undergraduate studies.

There is no interest on the loan while the student is enrolled at least part-time. The repayment period begins at 5% interest nine months after the student ceases enrollment at an institution of higher education. Maximum repayment time is 10 years and a minimum payment of $30 per month is required.

Borrowers who work in specially designated jobs or geographical areas may have part or all of their Perkins Loan repayment obligation canceled. Borrowers also may be eligible to have their payments deferred or postponed for specific periods of time.

(Refer to Eligibility Criteria section to determine eligibility requirements.)

**Stafford Student Loan (formerly Guaranteed Student Loan):** This federal loan program enables students to borrow directly from either a bank, a credit union, a savings and loan association, or other participating lenders to help fund their post-secondary education. For new borrowers who seek loans for periods of enrollment beginning on or after July 1, 1988, the interest rate is 8% and increases to 10% beginning with the fifth year of repayment. For students who currently have 7% or 9% GSLs, the interest rate on additional loans will continue to be 7% or 9%.

Depending on the student's need, undergraduate students may borrow up to $2,625 during their first and second years, and $4,000 during their third and fourth years. The aggregate amount that undergraduates may borrow is $17,250.

Loan repayments begin six to nine months (depending on the interest of the loan) after the student graduates, leaves school, or drops below half-time status.

(Refer to Eligibility Criteria section to determine eligibility requirements).

**PLUS Loans and Supplemental Loans for Students (SLS):** PLUS loans are for parent borrowers; SLS's are for students. Both loans provide additional funds for educational expenses and, like Stafford Student Loans, are made by a lender such as a bank, credit union, savings & loan association, and other participating lenders. SLS and PLUS loans disbursed on or after July 1, 1988 will have a variable interest rate, adjusted each year. The interest rate for the 91-92 award year will be determined in June 1991.

PLUS enables parents to borrow up to $4,000 per year, to a total of $20,000, for each child who is enrolled at least half-time and is a dependent student.

Under the SLS program, independent undergraduates may borrow up to $4,000 per year, to a total of $20,000. This amount is in addition to the GSL. (In exceptional circumstances, the financial aid administrator may authorize dependent undergraduates to apply for an SLS.)

PLUS and SLS borrowers do not have to show need, although like all borrowers, they may have to undergo a credit analysis. To receive consideration for an SLS, borrowers must apply for financial aid to establish their eligibility for Pell Grant and Stafford Loan.

SLS and PLUS borrowers must begin repaying interest within 60 days after the loan is disbursed, unless the lender agrees to let the interest accumulate until the deferment ends.

**Emergency Loan:** This institutional loan program assists students who demonstrate an urgent need for immediate funds. Applicants must be enrolled as full-time students in the semester for which the request is being made. The amount loaned can be up to $500 and must be repaid within 90 days. This loan may also be used by financial aid recipients as an advance on their financial aid awards for the purpose of purchasing books.

Applications are available at the Financial Aid Office and loans are approved within 24 hours. Release of funds will occur within five working days of the request.

**Short Term Tuition Loan:** This is an institutional loan program available to students who are unable to meet the deadline for fee payment.

To be eligible, an applicant must be admitted to a degree program, be enrolled on a full-time basis, and have no outstanding debts to the University. Financial aid recipients are not eligible to receive this loan since their tuition/fees payment can be deferred until their financial aid is disbursed.

Applicants who meet all criteria will be awarded the loan. The amount of award is limited to the student's actual cost of tuition and other required fees. The loan is due 60 days from the first day of classes each semester.(Late registration fees or other penalty charges are excluded from loan.)

## Student Employment

The University offers employment opportunities through various sources. In addi-

### 5% Perkins Loans Repayment Chart

| Amount Borrowed | Monthly Payments | Total Amount Monthly Payments | Number of Final Payment | Total Interest | Amount Repaid |
|---|---|---|---|---|---|
| $ 500.00 | $ 30.00 | 18 | $ 9.30 | $ 19.30 | $ 519.30 |
| 1,000.00 | 30.00 | 36 | 28.87 | 78.87 | 1,078.87 |
| 1,500.00 | 30.00 | 57 | 5.54 | 185.84 | 1,685.54 |
| 2,000.00 | 30.00 | 79 | 7.93 | 347.93 | 2,347.93 |
| 2,500.00 | 30.00 | 103 | 17.34 | 577.34 | 3,077.34 |
| 3,000.00 | 31.82 | 120 | 31.77 | 818.35 | 3,818.35 |
| 4,000.00 | 42.43 | 120 | 41.84 | 1,091.01 | 5,099.01 |
| 5,000.00 | 52.03 | 120 | 53.06 | 1,363.63 | 6,363.63 |
| 7,500.00 | 79.55 | 120 | 79.42 | 2,045.87 | 9,545.87 |
| 10,000.00 | 106.07 | 120 | 105.37 | 2,727.70 | 12,727.70 |
| 12,000.00 | 127.28 | 120 | 127.06 | 3,273.38 | 15,273.38 |

tion to the CWS Program and the CCWEP Program which are based on financial need, other jobs are available on and off-campus and assistance in locating work is provided to any student through the Job Location Development Program.

**College Work Study (CWS):** This is a federal financial aid program often included in the student's financial aid award. It provides employment opportunities to eligible undergraduate students. Students awarded CWS funds may work on campus, and an effort is made to assign them to jobs related to their field of study or special interests and skills.

(Refer to Eligibility Criteria section to determine eligibility requirements.)

**College Career Work Experience (CCWEP):** This state program is available to needy first-time undergraduate students who have been legal residents of Florida for the preceding two years. Students awarded CCWEP funds may work off-campus in career related jobs.

Salary rate is determined according to the type of work, the student's experience, and difficulty of the job.

**Job Location Development Program (JLD):** The Career Planning and Placement Office operates a Job Location Development Program to help currently enrolled students in locating off-campus part-time employment.

Students seeking work may contact the JLD coordinator in that office for information and assistance.

**Other Personnel Services (OPS):** On-campus employment opportunities are also available through the University Personnel Relations Department (Employment Office) or through the various University departments.

*Caution*: Financial aid recipients should be aware that all earnings from non-financial aid employment will be considered as a resource for the following academic year.

## Eligibility Criteria

To be eligible to receive Federal assistance, students must:

1. Be enrolled in an eligible program of study.

2. Be U.S. citizens; U.S. nationals; or U.S. permanent residents or reside in the United States for other than a temporary purpose (supportive documentation is required to verify residency or citizenship status).

3. Maintain satisfactory academic progress in their course of study (Refer to Satisfactory Academic Progress section).

4. Not be in default of any loan or owe a repayment on a Pell Grant, SEOG, or state grant.

5. Demonstrate financial need.

## Other Forms of University Assistance

A number of scholarships are made available by the University, private organizations, or individuals for students with academic promise and financial need. Selection of recipients, award amount, and eligibility criteria are determined by the University, or the donor(s), or both.

Application information and deadlines can be obtained through the Financial Aid Office.

## University-Wide Programs

To be considered for a variety of University scholarships, students are required to file a Need Analysis Form (see Application Procedures for Financial Aid).

**Army ROTC Scholarship:** Available to full-time freshmen or sophomores who are U.S. citizens, medically qualified, and under 25 years of age on June 30th of their graduation year. Applicants must be willing to serve as Army officers on active duty for four years or on Reserve/National Guard duty for eight years after graduation. Age waiver possible for veterans or current Reservists. Minimum GPA depends on academic major.

Scholarships pay for 80% of tuition, a flat rate for books and fees, and up to $1,000 per year subsidence for two or three years depending on the number of academic years remaining. No obligation is incurred by applying. Contact the Army ROTC office at 284-4873.

**Athletic Scholarships:** Athletic awards are made upon recommendation of the Athletic Department to students who meet the established qualifications for such awards. These awards are based on athletic and academic ability. Interested students should contact the Athletic Department at (305) 348-2756.

**Tuition Waivers:** Tuition waivers may be awarded to Non-Florida residents and foreign students to help defray a part or all of the out-of-state portion of their tuition. Awards are made to students who demonstrate high scholastic achievement, or to students who have special skills or talents.

**Faculty Scholars Program:** Outstanding high school graduates are selected each year for the distinguished Faculty Scholars Program. Scholarship awards are based on academic merit and are renewed each semester contingent upon the student maintaining a minimum 3.3 GPA. Eligibility criteria include a minimum score of 1200 on the SAT or 27 on the ACT and an average 3.5 high school GPA. For further information contact the Office of Undergraduate Studies at 348-2892.

**Music Scholarships:** Scholarships are awarded to talented students through audition and established criteria for such awards. These scholarships are made upon recommendation of the faculty of the Music department. Call 348-2896 for audition dates and further information.

**Theatre and Dance Scholarships:** Scholarships are awarded to talented students through audition and established criteria for such awards. Those scholarships are made upon recommendation of the faculty of the Theatre and Dance department. Call 348-2895 for audition dates and further information.

**PRIDE Scholarship:** This scholarship is available to any of the four finalists of the Program to Recognize Initiative and Distinction in Education (PRIDE) competition for high school seniors in the state. Free tuition for one year is awarded, renewable for an additional three years or until requirements for a baccalaureate degree are completed, whichever comes first. Students must maintain a 3.0 GPA to renew the scholarship.

**Brain Bowl Scholarship:** Two scholarships in the amount of $300 per term for two years will be available to members of the state championship team who are accepted for enrollment at the University. The maximum award will be $1,200 each, over the two year period. Renewal for the second year will be based on satisfactory academic progress.

**Golden Drum Scholarship:** Upon recommendation of the Achievers of Greater Miami, Golden Drum committee, the University will offer full tuition scholarships to deserving black high school seniors with a GPA of 3.0 or higher.

## Special Scholarships

**Distilled Spirits Wholesalers Scholarship:** Available to full-time juniors or seniors in the College of Business Administration.

**Elders Forum Scholarship:** Available to Freshmen students with financial need.

**Florida Bankers Educational Foundation Scholarship/Loan:** Available to full-time juniors or seniors who are under 40 years of age, Florida residents with a minimum 2.5 GPA intending to pursue banking careers in Florida.

**Felix Memorial Scholarship:** Available to undergraduate and graduate Music

majors with financial need. Contact the Music Department at 348-2896.

**Frank R. MacNeill Memorial Scholarship:** Available to U.S. graduate or undergraduate students majoring in Insurance or Marketing with financial need and a 3.0 GPA or higher.

**Gregory B. Wolfe - Student Government Association Scholarship:** Available to full-time juniors or seniors with financial need, a minimum 3.0 GPA, who are working towards enhancement of the University experience through a student organization on campus.

**Isadore Hecht Scholarship:** Available to graduates of Dade or Broward high schools who have completed 27 undergraduate hours towards a degree at the University. The students must be enrolled in the Colleges of Arts and Sciences or Business Administration, or the Schools of Education or Public Affairs and Services.

**Judith Seymour Memorial Scholarship:** Available to students enrolled in the College of Arts and Sciences who have completed 30 semester hours at the University and are interested in historic preservation.

**Kathy Lehman-Weiner Memorial Scholarship:** Available to English Education majors with a minimum 3.0 GPA.

**Mayor Henry Milander Public Service Scholarship:** Available to upper level students majoring in Public Administration or Criminal Justice. Must be a graduate of any public high school in the Hialeah, Miami Springs, Miami Lakes, Medley, and Virginia Gardens communities to qualify. Must be full-time students, maintain a minimum 3.0 GPA, and have civic leadership qualities.

**Ricardo Nunez Scholarship Fund:** Available to full time undergraduate students with good academic progress and financial need. Minimum 3.0 G.P.A.

**Sarah and Solomon Rosenberg Scholarship:** Available to black U.S. citizens (native Americans) undergraduate upper-division students, majoring in Engineering, Computer Sciences, or Business who demonstrate academic ability and have financial need.

**Senator Gwen Margolis Scholarship:** Available to black students majoring in Communication who demonstrate outstanding academic performance and financial need.

**Student Government Association Academic Excellence Scholarship:** Available to full-time students with financial need and a minimum 3.5 GPA.

**Student Government Association Handicapped Student Scholarship:** Available to full-time students with a physical disability, financial need, and a minimum 2.0 GPA.

**Student Government Association Minority Scholarship:** Available to full-time junior or senior minority students, with financial need and a minimum 2.5 GPA. who are working towards presenting their cultures to the University experience of their peers through a student organization on campus.

**The Two Hundred Society Scholarship:** Available to female students. Applicants must be U.S. citizens, residents of Dade County, full-time students, demonstrate financial need, have a minimum 3.0 GPA, have upper-division standing with a minimum full year of studies remaining, and enroll in at least one three-credit Women's Studies course.

Other scholarship opportunities are available through individual academic departments. Information about additional externally-funded scholarships is available in the Financial Aid Office.

## Application Procedures For Financial Aid

Listed below are all the documents required to apply for financial assistance, as well as procedures for submission of application. The deadline date to receive priority consideration for available funds is April 1 of the year preceding the academic year of enrollment.

**Need Analysis Document:** Students interested in all forms of aid must complete the Florida Financial Aid Form (FAF) and mail it to College Scholarship Service (CSS). The CSS will perform a need analysis based on the information provided on the FAF and send a copy to the University.

**Financial Aid Application (FAA):** This form must be completed by all students and mailed to the Financial Aid Office at their primary campus.

**Student Aid Report (SAR):** All undergraduate students are required to apply for the Pell Grant. Eligible students will be mailed a three part SAR by the Pell Grant processor. If the applicants are ineligible or need to make corrections, they will receive a two part SAR. The complete set must be forwarded to the Financial Aid Office, regardless of eligibility.

**Financial Aid Transcript (FAT):** All students who have attended another institution of higher education must submit a Financial Aid Transcript for each institution attended, whether or not aid was received.

**Income Tax Return:** Students selected for verification by the U.S. Dept. of Education and students who claim to be independent and are under 24 years of age must submit an official (signed) copy of their (and spouse) previous year Income Tax Return (1040, 1040A, or 1040EZ) to the Financial Aid Office. An official (signed) copy of their parents' tax return will also be required. The applicant's name and social security number should be written at the top of the Parent's Income Tax Form to insure proper student identification. (Students and/or parents who did/will not file must submit an Income Certification Statement for IRS Non-Filers available in the Financial Aid Office.)

**PLUS and SLS Applicants:** A separate application is required in addition to the other documents. The Financial Aid Office will mail all completed loan applications directly to the student. Unless the applicant specifies a particular lender, he/she must make their own contacts with lenders regarding the completed application.

Additional information may be requested by the Financial Aid Office before issuing an award package.

*Note:* The University will not begin processing financial aid applications until all eligibility criteria are met and application forms are properly completed. It is the student's responsibility to comply with all requirements. All forms and additional information may be obtained from the Financial Aid Office on either campus.

## Notification of Award

Once a need assessment has been completed, a notice of award will be mailed to the applicant.

It is the student's responsibility to review the award and all its conditions prior to accepting the aid offer. The student must then return the signed copy of the award along with all other required documents within 15 days or make an appointment with a financial aid officer to discuss any concerns he/she may have. If the student fails to do this, the award will be canceled and those funds will be offered to other eligible applicants.

## Disbursement of Aid

All financial aid recipients must go to the Cashier's Office to have their class schedule validated prior to the date shown on the Fee Due Notice received during registration. Failure to do this will result in the cancellation of all classes for the semester.

Financial aid checks will generally be available one month after classes begin each semester.

Tuition, fees, housing fees, and other outstanding debts will be deducted before releasing any funds to the student.

### Satisfactory Academic Progress

In keeping with guidelines set by the U.S. Department of Education, the Financial Aid Office must determine if a student is maintaining satisfactory progress for the receipt of Title IV student financial aid (Pell Grant, Supplemental Educational Opportunity Grant, College Work Study, Perkins Loans, Stafford Student Loan/PLUS Loan, SLS Loan, and State Student Incentive Grant programs). This rule applies regardless of the student's previous financial aid history.

The student must show incremental progress in his or her coursework along the continuum of attendance toward degree completion, as well as remain in good academic standing to be eligible for aid.

Students who fail to meet the satisfactory progress criteria will be issued warnings, placed on probation, or have all aid suspended. If a student disagrees with the Financial Aid Office's decision, he or she will have the right to appeal. (The complete Satisfactory Progress Policy statement is available in the Financial Aid Office and one copy is provided to each financial aid applicant along with the notification of their financial aid eligibility.)

### Financial Aid Refunds/Repayments

When a student receiving financial aid withdraws or drops below the required hours for receipt of that aid, the amount of refund due (according to the University Refund Policy) is refunded back into the financial aid programs from which the student received money. In addition, a portion of the financial aid received as cash disbursement for non-instructional costs must be repaid by the student to the University.

The complete Refund/Repayment Policy Statement and distribution formulas are available in the Financial Aid Office.

### Students' Rights and Responsibilities

As a recipient of financial aid, there are certain rights and responsibilities of which students should be aware. By knowing them, they will be in a better position to make decisions which could influence their educational goals and objectives.

Students have the right to know:

1. What financial aid programs are available at Florida International University.

2. The process and procedures that must be followed in order to be considered for financial aid.

3. The criteria used in selection of recipients, and the method used for calculating need.

4. The various programs in the financial aid award and how the need was determined.

5. The refund and payment policy at the University.

6. How the Financial Aid Office makes its determination on such questions as student progress, the appeal process, and other decisions.

7. The terms, including repayment, of any loan allocated by the University.

8. What special facilities and services are available to the handicapped.

Students are responsible for:

1. The timely and proper completion of all necessary forms by the established deadlines, and the accuracy of any information provided to the University in the financial aid application.

2. Promptly providing any additional information requested by the Financial Aid Office.

3. Keeping the Financial Aid Office informed of any changes in address, name, marital status, financial situation, or any change in their student status.

4. Reading and understanding all financial aid forms sent to them and/or signed by them and keeping copies of the forms.

5. Notifying the Financial Aid Office of any scholarship, grant, or other resources made available to them from non-University sources while they are receiving financial aid.

6. Notifying the Financial Aid Office if they withdraw from the University or change their enrollment status. Some repayment may be expected on a prorated basis. Future aid may be suspended if arrangements for payment are not made with the Financial Aid Office.

7. Maintaining satisfactory progress in order to be considered for financial aid.

8. Visiting the Cashier's Office for an exit interview if they have received a Perkins Loan or Stafford Student Loan and do not plan to return to school the following semester.

9. Re-applying for aid each year.

## Student Fees and Student Accounts

### Fees

Registration and tuition fees are established by the Board of Regents as required by the Florida Legislature. These fees are subject to change without notice. The 1990-91 credit hour fee schedule is as follows:

#### Credit Hour Fees

| | Florida Resident | Non-Florida Rasident |
|---|---|---|
| Undergraduate | $41.92 | $152.29 |
| Graduate, Thesis or Dissertation | $74.63 | $236.56 |

#### Student Fees

| | | |
|---|---|---|
| Athletic | $10.00 | $10.00 |
| Health | $24.30 | $24.30 |

The Health and Athletic fees are nonrefundable fees assessed each term.

Registration fees for course audits are the same as the above fees, except that no assessment will be made for the out-of-state portion.

A schedule of registration and tuition fees for all programs is published prior to each semester and can be obtained at the Office of Registration and Records. Since fees often change in the fall semester the above fees should be used for information purposes only. The schedule of classes will contain the most accurate fee information.

### Fee Waivers

Students using a fee waiver as part of the fee payment must present the original and the student copy to the Cashier's Office at the time of payment, on or before the last day to pay fees. Students who are responsible for a portion of their fees in addition to the fee waiver will be required to pay their portion before the fee waiver is applied.

University and State employees using the State employee fee waiver to pay their fees must register on or after the day established in the official University calendar for State employee registration. A properly completed and approved waiver form must be presented at the Cashier's Office by the date published for the last day to pay fees. The State employee fee waiver will not be accepted as payment for course registrations prior to the announced date for state employee registration.

Senior citizens fee waivers are available to persons 60 years of age or older who meet the requirements of Florida residency as defined in this catalog. The fee waiver allows qualified individuals to

attend credit classes on an audit basis. Senior citizens using the fee waiver must register during the first week of classes

Florida law requires that State employee fee waivers and senior citizen fee waivers be granted on a space available basis only; therefore, individuals using these waivers must comply with the procedures outlined in the schedule of classes for each semester.

*Refunds will not be processed for employees who have registered and paid prior to the state employee registration day and wish to use the fee waiver.*

### Fee Payment

Fees may be paid at the Cashier's Office at University Park, PC 120, or at North Miami ACI 140. Broward students may pay at the Broward Community College Cashier's Office, by mail or at the Cashier's Office at University Park or North Miami. Night drop boxes outside the Cashier's Offices are available for fee payments by check or money order through the last day to pay fees. Payment is also accepted by mail. The University is not responsible for cash left in the night drop or sent through the mail. Failure to pay fees by the established deadlines will cause all courses to be cancelled. See *Fee Liability* below.

### Late Registration/Payment Fee

Students who register or pay after the published deadline for fee payment will be subject to a Late Fee. The amount of the fee will be published in the schedule of classes for each semester.

### Florida Prepaid Tuition Plan Students

All students planning to register under the Florida Prepaid Tuition Plan must present their FPTP identification card to the University Controller's Office, PC 510 on the University Park Campus or at the Cashier's Office ACI 140, on the North Miami Campus before the published last day to pay fees. The portion of the student fees not covered by the plan must be paid by the student prior to the published last day to pay fees to avoid cancellation of classes.

### Financial Aid Students

All financial aid recipients must come to the Cashier's Office and pay the difference between their financial aid or scholarship awards and their final fee assessment and have their class schedule validated at the Cashier's Office prior to the published last day to pay fees. Failure to have the schedule validated will result in the cancellation of all classes for the semester. The validation process cannot be handled through the night drop or by mail, but must be done in person.

### Fee Liability

A student is liable for all fees associated with all courses in which he/she is registered at the end of the drop/add period. The fee payment deadline is published in the official University calendar. If fees are not paid in full by the published dates, all courses will be cancelled and any money paid will be lost.

*Registration is not complete until all fees are paid in full.*

### Reinstatement of Classes

Appeals for reinstatement of registration for classes cancelled for fiscal reasons must be filed in writing on the prescribed form with the University by the time specified on the cancellation notice. Each request will be evaluated by the Reinstatement Appeals Committee. Reinstatement will be considered for all classes on the class schedule at the end of the drop/add period. Reinstatement cannot be requested selectively for certain classes. The decision of the committee is final and all reinstatement activity, including fee payment, must be completed prior to the end of the fourth week of classes. The late registration/payment fee is applicable to all reinstatement approvals.

### Application Fee

A non-refundable fee of $15 shall accompany each application for admission to the University.

### Vehicle Registration Fee

A non-refundable annual vehicle registration fee is applicable to all persons operating or parking a motor vehicle on both the University Park and North Miami campuses. Upon payment of the applicable fee and registration of the vehicle at the University Public Safety Department each vehicle will be assigned a parking decal which must be permanently affixed on the vehicle. The decal is required for all vehicles parking on campus. Parking and traffic regulations are strictly enforced.

### Other Fees

**Library Fines**

| | |
|---|---|
| Per book per library hour | .25 |
| Maximum fine per book | $5.00 |
| Lost book fine | $35.00 |

**Intern Certificate of Participation**

| | |
|---|---|
| Per credit hour | $4.76 |

*Note:* These fees are subject to change as permitted by law. Additional fees may be added and special purpose fees may be assessed in some instances.

### Checks

The University will accept personal checks for amounts due to the University. These checks must be in the exact amount due only. The Cashier's Office will not accept checks above the amount due, third party checks or checks for cash. State law requires that a service fee of $15 or 5% of the amount of the check (whichever is greater) be assessed on a check returned unpaid by the bank for any reason. Returned checks will be assigned to an agency for collection if not promptly paid. When an account has been assigned the collection agency fee will be added to the University charges for collection at the current contract rate. Returned checks on student accounts will result in cancellation of classes and will require petition for reinstatement. See reinstatement of classes above.

The Cashier's Office will not accept a check on any student's account which has had two previous dishonored checks.

### Refunds

A refund will be made upon written application by the student of all fees, except the health and athletic fees, for all courses dropped during the drop/add period.

Students who have completed registration and have paid all fees due and have completely withdrawn from the University prior to the end of the fourth week of classes are eligible for a refund of 25% of total fees paid (except the health and athletic fees) less the capital improvement and building fees. Refund will be made only upon written application by the student.

– In the following exceptional circumstances, a full refund of total fees paid (except the health and athletic fees) will be made upon presentation of the proper documentation:

– Death of a student or immediate family member (parent, spouse, child, or sibling) - Death certificate required.

– Involuntary call to military service - copy of orders required.

– Illness of student of such severity or duration to preclude completion of courses - confirmation by a physician.

Processing of refund applications begins after the end of the drop/add period each semester.

Appeals for tuition refunds must be submitted in writing to the Cashier's office within two years after the end of the term for which the refund is requested. There are no exceptions to this policy.

### Past Due Accounts

Delinquent accounts are sufficient cause to prohibit registration, graduation, release of transcripts, or release of diplomas.

The University is not able to grant credit or time payments for any fees. Financial aid is available to those qualifying through the Financial Aid Office. A limited number of short term loans are available to full time enrolled students who may experience problems in meeting fee payment due dates.

The University reserves the right to assign any past due account to an agency for collection. When an account has been assigned the collection agency fee will be added to the University charges for collection at the current contract rate.

### Deadlines

Students are reminded that deadlines are strictly enforced. The University is not able to grant credit or to extend the fee payment period beyond the time set in its official calendar. The University does not have the authority to waive late fees unless it has been determined that the University is primarily responsible for the delinquency or that extraordinary circumstances warrant such waiver. The University has no authority to extend deadlines for individual students beyond those set by the official calendar.

# Academic Affairs

The Office of Academic Affairs plans and administers the instructional programs of the Colleges and Schools of the University. Matters affecting faculty, curriculum and the development of undergraduate and graduate degree programs fall within its purview. This office also supervises academic support programs, such as Continuing Education, the Libraries, Instructional Media Services, Sponsored Research and Training, FAU/FIU Joint Center for Environmental and Urban Problems, Latin American and Caribbean Center, Center for Economic Education, Institute for Judaic Studies, Institute for Public Policy and Citizenship Studies, The Art Museum, Multilingual-Multicultural Studies Center, Southeast Florida Center on Aging, Southeast Multifunction Resource Center, and the Women's Studies Center.

Providing direct service to students outside the classroom, and influencing the instructional programs, the following units also report to the Office of Academic Affairs: the Office of Undergraduate Studies and the Division of Graduate Studies.

Responsible for all the academic units, the chief academic officer is the Vice President for Academic Affairs. The Vice President also serves as liaison to the Florida Board of Regents for academic matters, and as a member of the University Executive Staff, the Vice President leads in the overall planning and direction of the University.

(For detailed information on the International Banking Center, Institute for Public Policy and Citizenship Studies, FAU/FIU Joint Center for Environmental and Urban Problems, Latin American and Caribbean Center, Center on Aging, Center for Economic Education, Institute for Judaic Studies, and Women's Studies Center refer to the Center and Institute Section.)

### Policy Statement with Reference to Religious Holy Days

A faculty member who wishes to observe a religious holy day shall make arrangements to have another instructor conduct the class in his or her absence, if possible, or shall reschedule the class.

Because there are some classes and other functions where attendance may be considered essential, the following policy is promulgated:

1. Each student shall, upon notifying his or her instructor, be excused from class to observe a religious holy day of his or her faith.

2. While the student will be held responsible for the material covered in his or her absence, each student shall be permitted a reasonable amount of time to make up any work missed.

3. No major test, major class event, or major University activity will be scheduled on a major religious holy day.

4. Professors and University administrators shall in no way penalize students arbitrarily who are absent from academic or social activities because of religious observances.

## Office of Undergraduate Studies

The Office of Undergraduate Studies is responsible for undergraduate program activities that span more than one academic unit. Included in these activities are the Academic Advising Center, offering advising for freshmen, undecided majors, students changing majors, and non-degree seeking students, and monitoring of Core Curriculum and General Education requirements; the University Learning Center, providing CLAST counseling and academic preparation, national test administration, and assistance in improving academic skills; the Faculty Scholars awards and the University Honors Program; and ROTC. The office is located in PC 115, University Park, 348-2099; and ACI-180, North Miami Campus, 940-5754.

## Division of Graduate Studies

**Richard L. Campbell,** *Dean of Graduate Studies*

**Ruben D. Jaen,** *Coordinator of Graduate Studies*

The Division of Graduate Studies is under the administration of the Dean of Graduate Studies, who reports directly to the Provost and Vice President for Academic Affairs.

The Graduate Dean is assisted by a Coordinator of Graduate Studies, who has responsibility for all requests for candidacy certification, assists with minority student recruitment and admission, and also assists the Dean of Graduate Studies with the divisional matters.

The Division of Graduate Studies is responsible for: (1) the direction and support of all University graduate programs; (2) the development of and compliance with University graduate policy, procedures, and planning; (3) graduate financial aid, acquisition and distribution; (4) Universityclientele linkages for development support and productivity; (5) graduate program external advisory councils; (6) graduate program review and accreditation; (7) budgetary support and facilities for graduate programs; and (8) planning, development, budgetary support and external resources.

Academic Deans and Department chairs within academic units have the responsibility for detailed operations of all graduate programs.

The Graduate Dean works with the Graduate Council in the formulation of new graduate policies and procedures. The Graduate Council is a subcommitee of the Faculty Senate and consists of members who also represent their respective colleges/schools on the Council. The Graduate Council reviews curricula changes proposed by academic units and endorsed by the University's Curriculum Committee.

Another committee in the Division of Graduate Studies is the Advisory Committee for Graduate Studies. This Committee makes recommendations to the

Graduate Dean on the implementation of graduate policies and procedures on all programs that offer graduate degrees. The Dean of Graduate Studies serves as Chair of this Committee. Generally, the members on this Committee are assistant and associate deans who have responsibility for graduate education in their respective academic units.

Graduate students seeking information on general graduate policies and procedures, or instructions on preparing and filing the thesis or dissertation, should contact the Division of Graduate Studies in PC 520, University Park, or call 3482455 for an appointment.

## Libraries

The University Libraries are housed in the Athenaeum (AT) at University Park, and in a new Library building (LIB) on the North Miami Campus.

The total library collection comprises 900,000 volumes, in addition to substantial holdings of federal, state, local, and international documents; maps; microforms; music scores; newspapers; institutional archives; and curriculum materials. The Library subscribes to 7,075 scholarly journals and other serials.

A computerized catalog of library holdings provides a listing of materials in both FIU Libraries, and other libraries in the State University System. The bulk of the collection is housed in open stacks.

Classification of library resources is according to the Library of Congress system, except for some of the documents and special collections (e.g., U.S., Florida, and U.N. documents, archives, etc.) which are arranged by their own classification systems and have separate public catalogs.

In keeping with the University's commitment to day and night operation, the libraries are open when the University is in session and during vacation periods. For exact library hours, please consult the posted schedules. Staff members are always available at the Public Service desks to assist students and faculty in their use of the library.

### Consortium Library Privileges

Currently registered students, faculty, and staff may use the libraries of any of the other campuses of the State University System. For access to libraries in the southeast Florida region, students, faculty and staff should consult with members of the Library staff.

A state-of-the-art system of interlibrary loan links the libraries with others throughout North America. It includes the use of telefacsimile for time-critical requests.

## Instructional Media Services

Instructional Media Services specializes in the development, production, and utilization of various types of audiovisual and communication media for educational purposes. The services offered are listed below. (an asterisk indicates services available to students):

**The Production Centers**[1] are "do-it-yourself" media and graphic arts productions labs, providing technical assistance to faculty, staff and students in the creation of visual aids such as slides, overheads, flyers, posters and charts for classroom presentations, papers or projects. Professional help and instruction is available on the premises in the use of Macintosh computers, letter machines, copystand cameras, overhead-makers, laminators, etc. While consumabale items such as films, posterboard and transparencies are to be provided by students, there is no fee for either the help provided or the use of the facilities. (AT-134 at University Park; LIB-150 at North Miami).

**Photography Services** provides still photographic support and services to faculty and staff for educational, training and informational purposes. (AT-139 at University Park; services available to all FIU campuses).

**Instructional Graphics** prepares artwork, graphs, illustrations, charts and posters for faculty and staff. (AT-135 at University Park; serves other campuses through fax and inter-office mail).

**Instructional Television Production** produces instructional media programs (video and audio recordings, both in-studio and remote, teleconferencing, and multi-media programs) for faculty and staff. (VH-245 at University Park; services available to all FIU campuses).

**Equipment Distribution and Scheduling**[1] provides a large variety of educational audiovisual equipment for use by faculty and staff. Services are available to students for classroom use and when sponsored by professors. (PC-236 at University Park; ACI-193 at North Miami Campus).

[1](These services are available to students, as well as faculty and staff.)

Other services available are consultation on the purchase, rental, and installation of audiovisual equipment; the rental of films for classroom viewings; and professional guidance on a wide range of audiovisual instructional topics and technology. For more information, contact 348-2811, AT-136, University Park; or 940-5929, LIB-150, North Miami Campus.

### Consortium Media Privileges

Faculty, staff and students can use the audiovisual services on any campus of the Consortium. AV materials and equipment cannot be borrowed.

## Continuing Education

**Carolann W. Baldyga,** *Dean*
**Doris K. Sadoff,** *Assistant Dean*
**J. Patrick Wagner,** *Director, Off-Campus and Weekend Credit Courses*
**Karl L. Rodabaugh,** *Director, Conferences and Short Courses*

The University extends credit and noncredit learning opportunities through the Division of Continuing Education. Courses of instruction are developed and offered in a variety of formats. These include conferences, seminars, short courses, workshops, lecture series, certificate programs and courses for academic credit. Learning opportunities are made available at locations throughout Dade, Broward and Monroe counties, the University's campuses and abroad through special arrangements. Instruction can be designed to serve specific needs and respond to requests from community groups, professional organizations, businesses and industry.

The Division's central office is located in ACI-100, North Miami Campus, 940-5669. Offices and services are also available in PC 245, University Park, 348-2490.

Administered through the Office of Academic Affairs, the Division of Continuing Education carries out the following programs: Off-Campus and Weekend Credit Courses and Conferences and Short Courses.

### Off Campus and Weekend Credit Courses

Over 230 courses for academic credit are offered off-campus and on weekends each year through the University's eight Colleges and Schools. Any course listed in the University Catalog may be conducted at a suitable location in Dade, Broward or Monroe counties. Courses are regularly conducted at hospitals, banks, community schools, and other public and private facilities appropriate for educational delivery. An individual, business, agency or association can request that a specific course or degree program be offered.

Registration for Continuing Education credit courses may be accomplished at the office of Registration and Records at University Park and North Miami Campus, and the University's Broward Community College, Central Campus office. Students may also register at the first class meeting.

Sponsored Credit Institutes are contract agreements through which an employer, public agency, or professional organization collaborates with the University to provide credit courses and degree programs for its constituents. These educational enhancement benefits are arranged to serve the needs of a designated group of individuals at a location and time convenient to them.

For information on how to request a course or to find out more about educational opportunities available through the Department, call 940-5653 in Dade, and 463-2790 in Broward.

### Conferences and Short Courses

Noncredit programs to develop professional competence, increase business skills, and provide personal enrichment are offered through short courses, workshops, seminars, and certificate programs. Local, regional, national and international conferences are coordinated in conjunction with the University's goals and objectives.

Continuing Education Units applicable to professional licensing requirements are available in appropriate programs.

Noncredit program information is published each semester by the Division and may be requested at the Division's offices at University Park and North Miami Campus, or by telephone, 940-5669 (Dade and Monroe), 463-2790 (Broward). Registration is initiated by mail, at the above locations, or at the first session of each program on a space available basis.

## Certificate Programs

### Legal Certificate Programs

Included are the Legal Assistant (Paralegal), Advanced Legal Assistant Studies, Legal Certification Review, Legal Secretarial Studies, and Law Office Administration. The objective of all programs is to develop occupational competence through practical and substantive instruction.

### Legal Assistant Certificate

The Legal Assistant curriculum consists of core courses which meet in the evenings supplemented by monthly Saturday seminars, and an intensive program which meets only on Saturdays. Practitioners completing a course or seminar may request CLA continuing education units from the National Association of Legal Assistants.

### Continuing Legal Education for Attorneys (CLER)

Seminars focusing on substantive and nonsubstantive topics, approved by the Florida Bar Association for CLER credit are presented in half-day or full-day format. Instructors are University faculty, and professionals in various disciplines.

### Professional Education for Realtors and Brokers

Issues of current interest to real estate professionals are presented in seminars approved by the Florida Real Estate Commission (FREC) for continuing education credit.

### Certificate for Professional Travel Agents

This comprehensive six-month course develops skills required in the transportation industry with emphasis on the travel agency profession. The program offers a combination of academic exercise, practical application, and on-the-job training to develop desired qualifications. Certain phases of the program are highlighted by field trips to provide firsthand knowledge of travel industry suppliers.

### Video Production Certificate

In conjunction with the School of Journalism and Mass Communication, the Division offers the Certificate in Video Production. Hands-on exercises lead students through all major phases of video production. The program provides preparation for the fields of broadcasting, instructional video, corporate video, and applications in advertising and public relations.

### Marketing Communication Certificate

Marketing Communication is designed for individuals who seek a career or wish to develop specific skills for current or prospective employment in the field.

Designed for marketing support staff, designers wishing to expand their base of knowledge, employees assigned to MARCOM tasks, home and small business owners who need greater proficiency in these areas, and government and non-profit employees who are communicating with the public. The courses cover writing well at work, graphic design and marketing strategies. Any of the courses may be taken for regular continuing education units.

This certificate program recognizes that students come from varying backgrounds. It is organized to help strengthen specific areas of expertise.

### Independent Study by Correspondence

The State University System offers a program of over 140 courses with instructors drawn from the University of Florida, Florida State University, and the University of South Florida. The program is administered by the Department of Independent Study by Correspondence, University of Florida, 1938 West University Avenue, Gainesville, Florida 32603, (904) 392-1711.

## Sponsored Research and Training

**Thomas A. Breslin,** *Vice Provost and Director*

**Catherine F. Kennedy-Thurman,** *Associate Director*

The Division of Sponsored Research and Training serves the research and training needs of interested faculty by providing timely information on the availability of local, state, and federal program support. The attraction of these funds to the campus provides an opportunity to better serve the needs of the people of Florida through services not regularly funded by the Legislature.

Among the major goals of the Division of Sponsored Research and Training are the following: to help stimulate faculty and staff interest in research and training projects; to assist the faculty and staff in obtaining funds for research and training projects; and to provide technical assistance to faculty and staff who manage contract and grant programs for the University. For more information, contact 348-2494.

## The Art Museum

**Dahlia Morgan,** *Director*

The Art Museum of the University has served the South Florida community for the last seven years exhibiting shows of local and national importance. Exhibitions from outside the University and the area are intended to display the finest available and affordable examples of contemporary and historical art. These shows are obtained from a variety of sources, primarily professional organizations and lending institutions, individual artists, commercial galleries, and other educational institutions.

The types of exhibitions displayed directly benefit not only the University community, but also the public. Atten-

dance records show that approximately 200 people per day visit the facility and come from Dade, Broward, Palm Beach, and Monroe counties, for the most part. The Museum is open six ' days a week and one evening.

The Art Museum, which occupies a 4,000 square foot area on the University Park, opened with an internationally acclaimed exhibition of Contemporary Latin American Drawings in April, 1977. Since that date many exhibitions have been displayed including: Alberto Giacometti, Draftsman and Sculptor; The Texturology Series of Jean Dubuffet; Public Relations: Photographs by Garry Winogrand; Mira, Mira, Mira, Los Cubanos de Miami; Alfred Stieglitz, 1894-1934; William Wiley; A Collector's Eye: The Olga Hirshhorn Collection; Miriam Shapiro, A Retrospective: 1953-1980; Neil Welliver; Treasures of the Norton Gallery; Manuel Neri; Realist Watercolors; English Naive Painting; Michael Graves Exhibition; Marsden Hartley Exhibition; Anxious Interiors; American Art Today: Still Life; and nationally acclaimed Marcel Duchamp Exhibition.

The Museum has continued to enhance its exhibition program with a lecture series which has included many of the exhibiting artists and scholars, museum curators, and others who have been involved with the particular exhibition. The highly-acclaimed Critic's Lecture Series, sponsored by the Museum, has included: Germaine Greer, Robert Hughes, John Cage, Tom Wolfe, Carter Ratcliff, Susan Sontag, Linda Nochlin, John Canaday, John Simon, and Michael Graves.

The Museum is operated by the Director, the Coordinator of University Collections, and a staff made up partially of University students working through an internship program.

# Student Affairs

The mission of the Division of Student Affairs is to contribute to the total educational process of students by creating a learning environment which fosters personal growth and development; promotes cultural diversity; provides programs and services which enhance intellectual, social, cultural, physical, emotional, and spiritual development; and prepares students to become contributing members of the community.

The Division is comprised of the following departments and programs: Admissions, Campus Ministry, Career Planning and Placement, Disabled Student Services, Enrollment Support Services, Financial Aid, Greek Organizations, Intercollegiate Athletics, International Student Services, Minority Student Services, Orientation, Precollegiate Programs, Public Safety, Student Activities, Student Counseling, Student Government, Student Health Services, Student Judicial Affairs, Student Union, and University Housing.

Student Affairs offices are located at University Park in University House, the first floor of PC, the Golden Panther Arena and the Modular Building on the west side of campus. On the North Miami Campus, offices are located in the Student Center Building, the Trade Center, and the third floor of the Library.

## Admissions

Admissions is responsible for the recruitment and admission of undergraduate applicants. Staff provides information to prospective students, guidance counselors and the general public to inform them of the academic and other educational programs offered by the University. The department also collects and processes official application materials for all graduate admissions. For specific information on the application process and requirements for admission please refer to the General Information section of this catalog.

Location: PC 140, University Park, 348-2363; ACI 160, North Miami Campus, 940-5760; Trailers, Broward Program, 475-4150.

## Campus Ministry

The Interfaith Campus Ministry serves student groups involved in a variety of activities. Professional representatives from various faiths are available for personal appointments. Individual denominations sponsor campus-wide programs including worship, study groups, social gatherings, and cultural events. In addition, Campus Ministry sponsors programs and activities which are non-denominational.

Location: UH 340, University Park, 348-2215; SC 265, North Miami Campus, 940-5609 or 940-5610.

## Career Planning and Placement

Career Planning and Placement (CP&P) assists students with the identification of their skills, values and interests and provides the necessary tools for on-going self assessment. CP&P provides five services: Career Advisement, Career Mentoring Programs, Cooperative Education, Career Placement and the Job Location and Development Program. Through these services students and alumni learn up-to-date information about the world of work, career/major choices, occupational trends, career options, and job search techniques.

Cooperative Education allows students to combine classroom theory with career related practical work experience. Students work in professional training positions related to their major field of study and earn a both a salary and academic credits.

CP&P hosts numerous workshops and seminars, schedules on-campus interviews, operates a resume referral system, and lists job vacancy notices for part-time, full-time, and summer employment. It also houses a comprehensive career library, and a computerized career guidance system.

Location: UH 230, University Park, 348-2423; SC 260, North Miami Campus, 940-5813 Trailers, Broward Program, 474-1404.

## Disabled Student Services

Disabled Student Services provides information and assistance to students with disabilities who are in need of special accommodations. Individual services are available to students with visual, hearing, speech, physical, and learning disabilities; chronic health problems, mental or psychological disorders, and temporary disabilities. Services include counseling, coordinating classroom accommodations, providing special equipment, note-takers, readers, interpreters, adapted testing, special registration, and University and community referrals. Support and assistance in overcoming architectural, academic, attitudinal, and other barriers encountered is provided. Requests for services must be made prior to the beginning of each semester.

Location: UH 231, University Park, 348-3532; SC 261, North Miami Campus, 940-5813; Bldg. 9, Room 224, Broward Program, 948-6793.

## Enrollment Support Services

Enrollment Support Services manages the Division's computerized student records database, the University's degree audit (SASS) , and several computer-re-

lated programs. This unit also provides computer system planning support to academic units and other departments in the Division. The University Catalog, and the Course Schedule booklet published each semester are produced in this unit.

Location: PC 135, University Park, 348-2933.

## Financial Aid

Financial Aid is provided to students who otherwise would be unable to pursue their educational goals at the University. Financial Aid includes scholarships, grants, loans and campus employment. Financial need is determined on an individual basis using evaluation criteria provided by national agencies. For specific information on types of assistance, eligibility, application procedures and other requirements, please refer to the General Information section of this catalog.

Location: PC 125, University Park, 348-2431; ACI-160, North Miami Campus, 940-5765.

## Greek Organizations

Greek organizations contribute to the University by promoting leadership, scholarship, service, social activities and brotherhood and sisterhood. There are nine fraternities and five sororities coordinated by a Greek Council. In addition, an Interfraternity Council governs fraternities and a Panhellenic Council governs sororities. A formal rush period is held in the Fall semester, and an informal rush is held during the Spring semester.

Location: UH 219, University Park, 348-2950.

## Intercollegiate Athletics

FIU is a member of the National Collegiate Athletic Association (NCAA), the New South Women's Conference (NSWAC), and the Trans America Athletic Conference (TAAC) for men. The University has competed at the Division I-AAA level since September of 1987, having competed successfully at the Division II level since 1972. Programs and services in Intercollegiate Athletics provide an opportunity for student-athletes to develop as skilled performers in an educational setting. Much emphasis is placed on the student in student-athlete to ensure intellectual, emotional and social well-being.

### Athletics

Athletic team membership is open to all full-time students. Women's programs consist of basketball, volleyball, soccer, golf, tennis, and cross country. Men's programs consist of basketball, soccer, baseball, golf, tennis, and cross country. To be eligible for intercollegiate competition, the University requires each student-athlete to be in good academic standing and make satisfactory progress towards a degree. Team membership is determined in a manner which does not discriminate based on race, sex, national origin, marital status, age or handicap.

Financial assistance is available to both freshmen and transfer students recruited for all 12 athletic teams. Assistance may include grants, scholarships, loans or self-help programs. To be eligible for financial assistance, each student-athlete must be in good academic standing and make satisfactory progress towards a degree.

### Campus Recreation

Campus Recreation provides a variety of intramural sports and recreation activities designed to educate, improve physical fitness, develop an appreciation for the value of physical exercise, and extend leisure time skills. The department manages open recreation and physical fitness facilities, and coordinates intramural leagues, club sports and special events.

Active sport clubs include Bowling, Crew, Cycling, Fitness, Lacrosse, Rowing, Scuba, Shotokan Karate, Tae Kwon Do, Rugby and Badminton. Fourteen intramural sports include bowling, basketball, flag football, golf, soccer, softball, co-recreational softball, volleyball, tennis, racquetball, floor hockey, wallyball, baseball, and slam dunk. Events such as power-lifting competitions, golf, soccer, racquetball and tennis tournaments, deep sea fishing trips, and other recreation interests are featured each semester.

Campus Recreation also offers non-credit classes in a variety of subjects. Credit classes are offered each semester in the College of Education.

### Athletic and Recreational Facilities

The Golden Panther Arena is a multi-purpose facility which serves as the base for University programs in physical education, athletics, and recreation. The Arena has a seating capacity of 5,000. It contains racquetball courts, basketball courts, an auxiliary court area, and meeting rooms. The arena is open to students, faculty, staff, and alumni with valid University identification cards. FIU students are admitted to all regular season home athletic events free of charge upon presentation of a valid University identification card.

The Baseball and Soccer Fields are lighted and each have a seating capacity for 1,500 spectators.

Fitness Centers at University Park and North Miami campuses are equipped with a complete line of Nautilus machines and locker rooms. The Centers are available at no cost to currently enrolled students with valid identification cards. There is a $40 semester fee for faculty, staff, and alumni.

The Aquatic Center on the North Miami Campus overlooks the bay and is fully furnished to provide an environment for conversation, study and/or tanning. The multipurpose design of the 50 meter x 25 yard pool and diving well allow for recreational and instructional use.

The Racquet Sports Center at University Park has 12 lighted tennis courts and eight lighted racquetball courts. The Racquet Sports Center at North Campus has six lighted tennis courts, a sand volleyball court, and two full-sized basketball courts.

For additional information or hours of operation call:

Campus Recreation: 348-2951

Fitness Center: 348-2575, University Park; 940-5678, North Miami Campus.

Golden Panther Arena: 348-2900.

Racquet Sports Center:348-2763, University Park; 948-4572, North Miami Campus.

Aquatic Center: 948-4595.

## International Student Services

International Student Services provides assistance on matters regarding immigration regulations and procedures related to visa status. The staff also provides counseling and advisement on academic, personal and financial concerns, and serves as a liaison to academic and administrative departments throughout the University. An orientation program is offered each semester as well as international and inter-cultural programs to assist students in adapting more effectively to the University community and to living in Miami.

An active International Student Club collaborates with the department in organizing various social activities. Club programs enable students to participate in the international dimension of the Uni-

versity and provide opportunities for involvement in the greater Miami educational community.

Location: UH 217, University Park, 348-2421; SC 260, North Miami Campus, 940-5813.

## Minority Student Programs and Services

Minority Student Services provides minority students with personal, academic, social, and cultural support needed for the achievement of educational goals. Staff provides orientation, leadership development, counseling and tutorial services; and serves as a liaison to academic units and student support services university-wide. This department also collaborates with student groups in coordinating traditional cultural celebrations, and other activities for minority students' physical, mental and social well-being.

Location: UH 216, University Park, 348-2436; SC 260, North Miami Campus, 940-5817.

## Orientation

The Orientation program is designed to assist new students in understanding all aspects of the University environment.

New freshmen and transfer students are strongly urged to attend an orientation program before their first term of enrollment. Several orientation sessions are scheduled each Summer Term and at least one session is offered before Spring and Summer Terms. Information about the orientation program and related services is mailed to newly admitted undergraduate students.

Location: UH 350, University Park, 348-3828.

## Precollegiate Programs

Precollegiate Programs provides information on educational opportunities and campus resources, and prepares promising minority high school students for college through partnership programs with educational, civic, religious, business, and government agencies and organizations. Staff work closely with the Admissions office to assist participants gain entry into the University.

Location: UH 216, University Park, 348-2436.

## Public Safety

Public Safety is a full service Public Safety organization which maintains a peaceful and safe environment throughout the University community. The department is a unit of the State of Florida law enforcement agencies and its members have full police authority to enforce state and local laws and University regulations.

Public Safety also enforces University Park Rules and Regulations. A parking decal or permit is required in order to park any vehicle (including motorcycles, motorbikes, and mopeds) on campus. Decals may be purchased in the Cashier's office, or in Public Safety if paid by check or money order. A receipt will be issued which must be presented at Public Safety along with a copy of the current vehicle registration. After the vehicle is registered a decal will be issued. The entire decal (uncut and unaltered) must be permanently affixed to the vehicle. All regulations are strictly enforced. For more specific information please refer to the University Parking Rules and Regulations brochure available on either campus.

Location: Tower, University Park, 348-2626 (Information), 348-2911 (Emergency); SO I, North Miami Campus, 940-5555 (Information), 940-5911 (Emergency).

## Registration and Records

The Office of Registration and Records is responsible for directing the University registration activities, including Off-Campus course registration, and establishing, maintaining and releasing students' academic records. The office is also responsible for Space and Scheduling, Veteran's Affairs, Graduation, and Records Archiving.

The office staff has the responsibility to serve the student, faculty, other administrative offices, and the general public; to hold safe and preserve the confidentiality of the student's records; and to ensure the integrity of the University's policies and regulations.

Location: PC 130, University Park, 348-2383; AC1 160 North Miami Campus, 940-5750; Broward Program, 475-4150.

## Student Activities

Student Activities provides learning opportunities in which students can practice and develop leadership, communication, problem-solving, program planning, organization, implementation, and evaluation skills. Activities are co-curricular and cover all aspects of the educational experience. Over 125 registered student organizations exist to enrich campus life and contribute to the social, cultural, and academic growth of students. Students may organize additional groups that promote the University's educational mission.

This unit also serves as a resource for commuter students. The Commuter Student Program collaborates with academic, administrative, and student affairs units to provide resources, services, and inter-agency and community referrals.

Various informational materials are published and distributed on housing rental practices, landlord/tenant regulations, and other campus resources for commuter students.

Location: UH 340, University Park, 348-2137; SC 363, North Miami Campus, 940-5813; Modular 12.1 Broward Program, 475-4167.

## Student Counseling Services

Student Counseling Services focus on enhancing the emotional well-being of students. A variety of individual and group services are offered, including career/lifestyle counseling, workshops on mental health and wellness issues, and personal counseling for problems associated with anxiety, depression, interpersonal relationships, coping skills and feelings of inadequacy.

Counseling Services also offers a structured, supervised training program for graduate level students who seek exposure to a diversified population within a multi-disciplinary setting. All services are provided to students free of charge. Complete confidentiality is assured.

Location: UH 211A, University Park, 348-2434; SC 260, North Miami Campus, 940-5813.

## Student Government Association

The Student Government Association is comprised of senators from all Schools and Colleges who are elected by the student body. SGA appropriates an annual budget generated by the Activity and Service fee which is paid by all students at the time of registration. Bills, appropriations, and resolutions come before

the senate for discussion, support, funding, or other action on matters related to various activities, issues or causes.

SGA members represent the student body on university-wide committees and task forces to ensure student representation at the administrative level. Students are encouraged to become involved in all aspects of Student Government.

Location: UH 311, University Park, 348-2121; SC 363, North Miami Campus, 940-5680; Modular 12.1, Broward Program, 475-4167.

## Student Health Center

The Student Health Center provides accessible primary health care resources to enable students to maintain a positive state of health. The department holistic promotes health education, wellness programs and preventive medicine. The Health Center stimulates student awareness of health behaviors which may be integrated into lifestyle practices for future health and wellness.

Services include routine medical care; physical examinations, family planning, diagnosis and treatment, screening, laboratory testing and private consultations with a physician or nurse practitioner. Referrals are made to local hospitals, pharmacies, and physicians for services not provided. Appointments are required. In case of an emergency on campus, Public Safety may be called 24 hours a day.

Office visits are free to students who present a valid identification card. Laboratory and pharmacy services are provided for a nominal fee. The University strongly recommends the purchase of student health insurance. Brochures describing insurance coverage in detail are available at the Student Health Center on both campuses.

Please see the Student Handbook for more detailed information on Student Health Services.

Location: Student Health Center, University Park 348-2401; HM 110, North Miami Campus, 940-5620.

## Student Judicial Affairs

University policies and procedures regarding the rights and responsibilities of students, and a Code of Conduct assuring that these rights can be freely exercised without interference or infringement by others, are handled in this department.

Students are subject to Federal and State laws, local ordinances, and regulations of the University and the Florida Board of Regents. A breach or violation of any of these laws or regulations may result in judicial or disciplinary action.

Complaints on academic matters should be directed to the Office of the Provost for Academic Affairs. Complaints on non-academic matters should be directed to Judicial Affairs.

If an individual is involved in an offense resulting in criminal charges prior to admission to the University, the circumstances of the case may be reviewed to consider the individual's eligibility for admission and participation in extracurricular activities.

For more specific information on the Student Code of Conduct, please refer to the "Student Handbook."

Location: SC 260, North Miami Campus, 940-5817.

## Student Union

The Student Unions on each campus provide direct services to students and the University community. University House (UH) at University Park, and the Student Center (SC) at North Miami are the focal points for the University community to meet and interact in a non-classroom, educational environment. As the "hub" of student life, the buildings house the bookstore, cafeteria, grill, ticketmaster, vending machines, automatic banking facilities, lounges, meeting rooms, and a gameroom. SC also houses a post office and theatre. UH also houses a radio station, ballroom, and an overnight lodging facility.

Services include lost and found, locker rental, vending refunds, non-credit courses, and student identification card distribution.

Staff in the unions also coordinate the scheduling of space and assist with the production of Student and university-wide events.

Location: UH 314, University Park 348-2297; SC 125, North Miami Campus, 940-5800.

## University Housing

Apartment style housing is available for single and married, undergraduate and graduate students on both campuses. Services and programs are designed to be responsive to student needs and support the educational goals of the University.

The residential environment provides an opportunity to meet and to interact with others in ways that encourage intellectual, social and personal growth, and increase awareness of the rich cultural diversity within the University. Students residing on campus have ready access to academic and recreational facilities.

Cooking and refrigeration appliances are provided in each room, however a meal plan may be purchased through the cafeteria on either campus.

All housing is assigned on a space available basis without regard to race, ethnic origin, or religious preference. Modified space is available to students with physical disabilities. Contracts are issued for the Fall and Spring semesters. Summer housing is available on request. For further information and rates, write the University Housing Office, H-101, FIU, University Park, Miami, Florida, 33199.

Location: H-101, University Park, 348-4190; Residence Hall Lobby, North Miami Campus, 940-5587.

# Business and Finance

The Division of Business and Finance comprises the offices of Personnel, Equal Opportunity Programs, Physical Plant and Planning, Controller, Purchasing, Environmental & Safety, and Legal Affairs.

## Equal Opportunity Programs

The office provides leadership and direction in the administration of the University equalization programs for women and minorities in several ways. It assists University units in implementing and monitoring affirmative action procedures; provides a channel for employee and student grievances regarding discrimination, or issues indicating a need for additional affirmative action; administers implementation of the Policy to Prohibit Sexual Harassment; and promotes effective relationships between the University and community organizations. The Office also administers the State University System Scholarship Program. In addition, the Office maintains a liaison relationship with State and Federal agencies dealing with EEO and affirmative action. The Office is located on the University Park in PC 215.

### Florida Educational Equity Act

The Florida Educational Equity Act was passed by the State Legislature in 1984, and prohibits discrimination on the basis of race, sex, national origin, marital status, or handicap against a student or employee in the State System of Public Education. Procedures for implementing the Act have been developed, and the University prepares an annual report to ensure compliance with the Act. The Director of the Office of Equal Opportunity Programs is the University's Coordinator of Institutional Compliance with the Educational Equity Act. A copy of the Education Equity Act Plan is available for review in the Office of Equal Opportunity Programs. This Office has the responsibility for implementing a comprehensive grievance/complaint procedure for students, applicants, and staff who believe they have been treated inequitably based on race, sex, national origin, marital status, or handicap. Such grievances/complaints should be lodged with this Office in PC 215, University Park.

### AIDS Policy

Students and employees of the University who may become infected with the AIDS virus will not be excluded from enrollment or employment or restricted in their access to University services or facilities unless individual medically-based judgments establish that exclusion or restriction is necessary to the welfare of the individual or of other members of the University community. The University has established an AIDS Committee which includes representation from major University divisions and other University staff as appropriate. The Committee, which will meet regularly, is responsible for monitoring developments with regard to AIDS, acting upon and administering the University's Policy on AIDS in specific cases, and coordinating the University's efforts in educating the University community on the nature of the disease. In addition, the Committee will meet as needed to consider individual occurrences of the disease which require University action.

Persons who know or suspect they are sero-positive are expected to seek expert medical advice and are obligated, ethically and legally, to conduct themselves responsibly for the protection of others.

The University has designated AIDS counselors who are available to provide further information on this subject. Contact one of the following offices at University Part: Director, Office of Equal Opportunity Programs, PC 215; Counseling Services, UH 340; and Student Health Services, OE 115; and on North Miami Campus, Counseling Services, SC 261, or Student Health Clinic, TC 110.

### Sexual Harassment/ Educational Equity

All members of the University community are entitled to study and work in an atmosphere free from illegal discrimination. Florida International University's equal opportunity policies prohibit discrimination against students and employees on the basis of their race, color, creed, age, handicap, sex (including sexual harassment), religion, marital status, or natural origin. Under the policies, it does not matter whether the discrimination was intended or not; rather the focus is on whether students or employees have been treated differently or subjected to an intimidating, hostile or offensive environment as a result of their belonging to a protected class or having a protected status. Illegal sexual harassment includes unwelcome physical contact of a sexual nature, overt or implied threats to induce performance of sexual favors, verbal harassment, use of sexually suggestive terms, or display or posting of sexually offensive pictures.

Any employee, applicant, or student who believes that he or she may be the victim of unlawful discrimination may file a complaint with the Office of Equal Opportunity Programs, PC 215, University Park (348-2785) in accordance with the procedure.

## Internal Management Auditing

The basic function of the Internal Management Auditing department is to assist all levels of management in carrying out their responsibilities by furnishing them with independent appraisals, recommendations and pertinent comments concerning the activities reviewed.

## Auxiliary Services

Auxiliary Services supervises the bookstore and food service operations at both the University Park and the North Miami Campuses, including the Cafeteria, Rathskeller and all vending operations.

Auxiliary Services also supervises the Duplicating Services which includes a Print Shop, Convenience Copiers and a Total Copy Reproduction Center.

## Environmental Health and Safety

The Environmental Health and Safety Department are responsible for compliance with all federal, state, and local environmental, safety, fire, and radiation control regulations. With the exception of employee health and life insurance, the office also handles all university insurance. This department coordinates with the other university department to control all losses.

## Legal Affairs

Legal services are provided to the university under a contract with the law firm of Valdea-Faule, Cobb, Petrey, and Bischoff. The Office of Legal Affairs provides representation and advice to university administrators, faculty and staff concerning legal issues affecting the university.

## Personnel Relations

The Office of Personal Relations provides human resource management services for personnel of all academic and administrative departments on the University Park, North Miami and Broward Campuses. Categories of personnel who receive services are faculty, administrators, staff and student employees (including research or graduate assistants, college work study students, and student OPS employees). All services provided by the office are in compliance with applicable federal and state regulations, and include six major human resource management areas - Employment and Recruitment, Employee Training and Development, Employee Classification and Pay, Employee Benefits, Employee/Personnel Records, and Employee/Labor Relations.

The University Park office is located in PC 224, 348-2181; the North Miami Campus office is located in Library 322-A, 940-5545.

## University Physical Planning

The Physical Planning department is responsible for the direction of University long-range capital programming, facilities, and campus planning. These activities include capital budgeting, building programs, design coordination, construction management, and furnishing and occupancy coordination. The depart-

ment is also responsible for space assignment and management, as staff to the University Space Committee, coordinating all standards and requirements related to facilities and site planning of all campuses.

## Purchasing Services

Purchasing Services is responsible for a number of functions in addition to the primary function of centralized university purchasing. These other functions include Central Stores, Central Receiving, Property Control, Surplus Property, and Campus Mail. This same organization structure has been in operation since the university opened in 1972. Most key positions are filled with personnel with over 10 years of service in their units. The stability of personnel as well as the high level of cooperation between the related units of purchasing help to better serve the university.

## Physical Plant

The Physical Plant Department at University Park and North Miami Campus is responsible for the operation, maintenance, and repair of all university buildings, utilities systems, grounds, roads, and parking lots. The university's well known energy conservation strategy and work effort was conceived, reviewed, modified, and executed within the Physical Plant department.

# North Miami, Budget, and Information Resource Management

## Information Resource Management (IRM)

All computing and telecommunications activities on FIU campuses are under the direction of the Associate Vice-President for Information Resource Management (IRM). The three major divisions of IRM are University Computer Services (UCS), the Southeast Regional Data Center (SERDAC), and Telecommuncations.

### University Computer Services (UCS)

University Computer Services (UCS) provides instructional and research computing support to the faculty and students of all FIU academic departments on the University Park, North Miami, and Broward campuses. Computer hardware accessible to students includes a DEC VAX 8800 superminicomputer running VMS, a SUN 4/280 minicomputer and a SPARCserver 390 running UNIX, and numerous IBM-compatible and Apple microcomputers. Services of most interest to students include: introductory seminars and workshops on the most widely used equipment and software; comprehensive documentation libraries; numerous phone lines and several public terminal labs for dial-up and direct VAX/SUN access; open microcomputer labs; a discount microcomputer store; assistance with micro-to-larger system data communications; and peer and professional consultation on various other computer-related problems, within the limits defined by the academic departments.

In addition to instructional computing support, UCS, through its Applications Systems and User Services Groups, provides support for the administrative functions of the University, including Admissions, Registration, and Financial Aid.

**Lab Use:** Students are required to have a valid FIU picture ID card in order to use UCS terminal and micro labs. Occasionally, during the peak periods before midterm and final exams, lab hours are extended to meet increased demand. Nevertheless, users are advised to complete assignments early; time limits may be imposed during periods of high demand. Ethical computing practices are stressed. The University Park student lab facility is located in PC-411, PC-413, PC-414, PC-415, PC-416, PC-419, and PC 322. For a recorded message with current University Park student lab hours, call 348-2174. Direct other inquiries to the staff offices in PC-413A, 348-2568. The North Miami Campus combined micro and terminal lab is located in ACI 293. Call 940-5589 for information concerning the North Miami facility.

**Part-time Student Employment:** Each semester, University Computer Services employs over 35 part-time, student user consultants. Although primarily responsible for maintaining a good working environment and flow of users through lab facilities, these consultants also diagnose and resolve system and equipment malfunctions, and train other students to use the tools and computing resources available in the labs. Given the many different disciplines of the lab users, exposure to a large variety of hardware and software, and direct training by UCS professional staff, working as a user consultant for several semesters provides an excellent career experience and reference. Students with better than average interpersonal and computer skills are invited to apply.

### Southeast Regional Data Center (SERDAC)

The State University System's Southeast Regional Data Center provides primary academic computing services to Florida International University via an Ethernet network which connects student and faculty workstations to the Data Center's Unix/SUN and VMS/DEC VAX cluster services.

SERDAC's computers allow convenient access to the Internet and Bitnet international computer networks. The Data Center also provides FIRNCOM electronic mail and bulletin board services to the State Department of Education's Florida Information Resource Network (FIRN), which connects virtually all public educational entities in Florida. Information on these services may be obtained by calling 348-2695.

SERDAC's word processing facility offers a multitude of services, from the high volume generation of personalized letters and envelopes, to the electronic transmission of manuscripts to selected publishers. For information concerning this facility, please call 348-3069.

Primary operations and dispatch services for faculty, student, and administrative printout are located in University Park, PC-436. Please call 348-2109 for information concerning this facility.

### Telecommunications

This organization is responsible for providing voice and data communications services to the University community. Faculty and staff are the primary users of the University telephone system, and they share with students several intercampus data communications networks. These provide users access to all University computing resources, and gateways to statewide, national, and international computer networks.

FIU Telephone Operators are on duty seven days a week. They are responsible for servicing incoming information calls for the University Park (348-2000) and North Miami Campuses (940-5500).

Since they can notify the proper authorities in case of on-campus emergencies, FIU Operators may also be

reached by dialing "0" at University Park and ext. 5500 at North Miami. However, in an emergency, direct contact should also be made with Public Safety by dialing ext. 2911 at University Park and ext. 5911 at North Miami.

## University Budget Planning Office

The University Budget Planning Office is responsible for the development of all operating and biennial budgets in all budget entities, including the five year plan, legislative budget request, operating budget request and internal operating budget plan. The office is staffed by a director, a staff assistant, and three professional staff.

# University Relations and Development

The Division of University Relations and Development is responsible for the operation of all University programs relating to external relations and institutional advancement. Division activities are centered in three departments:

## Development

The Development Office coordinates the University's efforts to raise funds in support of the University and its programs from alumni and other individuals, corporations, foundations, and other private sector organizations. The Office develops and implements numerous programs to raise funds annually from alumni and others through the Fund for FIU, and works closely with the Board of Trustees of the FIU Foundation and other volunteers to increase private support for the University and its students.

The Vice President for University Relations and Development serves as the principal University Liaison to the Board of Trustees of the FIU Foundation, Inc., a group of leading South Florida business and community leaders dedicated to securing community support and private funds for the University.

## Alumni Affairs

The Office of Alumni Affairs seeks to maintain contact and encourage communication with and participation in special events with the more than 45,000 FIU alumni of record. Alumni participation is stimulated through activities by the FIU Alumni Association and through programs sponsored by this office including: publications, alumni social events, career development programs, speakers and workshops.

## University Relations

University Relations is comprised of three offices providing professional staff and resources to support university advancement activity.

The **Office of University Events** seeks to strengthen university and community ties, and to coordinate community events held on the university campuses. This office manages university events such as commencement, convocation, Presidential lectures and receptions, and hosts special campus visitors.

The **Office of Publications** is charged with the responsibility of producing effective, attractive, and informative publications which are consistent with the University's mission and goals and are in conformance with the requirements of the State University System. Publication staff provide editorial, graphic, design, typesetting, and production assistance for all university publications. This office produces the monthly faculty/staff newspaper, INSIDE.

The **Office of Media Relations** is the University's primary linkage with representatives of the print and broadcast media. News releases on university programs and on faculty, administrators and students are issued from this office. This office also provides assistance in promoting university events and activities in the media.

# Centers and Institutes

## Center for Accounting, Auditing, and Tax Studies

The Center for Accounting, Auditing, and Tax Studies (CAATS) conducts and sponsors innovative research. Major ongoing projects focus on the audit impact of emerging technology and on detection of fraud.

CAATS builds bridges to practitioners by turning ideas into products; it enhances the value of accountants' services to clients and to the public by contributing to audit efficiency and effectiveness. CAATS' international commitments relate to the accounting issues confronting the less developed nations, particularly in the Middle East and Latin America.

CAATS also conducts seminars and short courses designed to provide educational opportunities to South Florida public accountants, internal auditors, and management accountants. CAATS strives to be self supporting. Net fees earned by providing educational opportunities to accountants, together with contributions received from the public, are applied to research and to the enrichment of graduate instruction. In this way, CAATS provides the margin of excellence which enriches the entire educational experience.

All CAATS activity is dedicated to advancing accounting, auditing, and tax knowledge. CAATS is located in DM 397, University Park, 348-2581.

## Center for the Administration of Justice

The Center for the Administration of Justice (CAJ) was founded at Florida International University, a member of the State University System of Florida, in 1984 to engage in research, training and public education about the administration of justice in Latin America. With offices in Miami and San Jose, Costa Rica, CAJ has become a unique international resource at the forefront of justice sector reform in Latin America.

CAJ employs a multidisciplinary and international staff of specialists, including lawyers, political scientists, public administrators and public policy analysts. Many are former justice sector officials with experience and skills in justice sector issues.

Giving special emphasis on support to local efforts to strengthen and invigorate fair and independent justice systems, the CAJ regularly works with public officials, scholars and practitioners in Latin America.

The CAJ has become a leading source of information and leadership on justice sector reform issues in Latin America. Its assessments have been widely disseminated and have been critical in public policy decision-making throughout the region.

## Center for Banking and Financial Institutions

The College of Business Administration at Florida International University has a long tradition of preparing students for careers in the banking and financial insti-

tutions. The Center for Banking and Financial Institutions was established to provide additional services to banks and financial institutions located in the Southeast United States and in Latin America and the Caribbean.

Associates of the Center for Banking and Financial Institutions are a select group of highly qualified functional specialists in the areas of accounting, finance, information systems, marketing, and human resource management, who are interested in the application of their functional specialties in solving contemporary organizational problems in banks and financial institutions.

The center for banking and Financial Institutions at FIU meets the demands of the banking and financial service sector through four major activities:

### Education

The Center for Banking and Financial Institutions along with the Department of Finance, co-sponsors the Banking Certificate program. Upon completion of a four course sequence of banking and financial institution courses, students are awarded a Certificate in Banking from the College of Business Administration. The Center also supports educational opportunities for bank and financial institution employees and other individuals who wish to continue their education in the area of banking and financial institutions, through other off campus programs.

### Management Development

The Center for Banking and Financial Institutions develops and conducts quality training programs and conferences on topics that are of interest to and demanded by banks and financial institutions. The Center also offers custom in-house training programs for those institutions who desire a more focused or specialized program.

### Research

The Center for Banking and Financial Institutions supports theoretical and applied research on problems and issues in the financial service sector. The Center also publishes an academic journal, *The Review of Research in Banking and Finance.*

### Consulting

The Center for Banking and Financial Institutions serves as a consulting clearinghouse. The Center will assist banks and other financial institutions in contacting experts from FIU and nationwide to assist them in solving unique problems in their organizations.

The Center for Banking and Financial Institutions is located in W4-202, University Park, 348-2771.

## Center of Economic Research and Education

The Center of Economic Research and Education is a Type II Center approved by the Board of Regents of the State University System. The purpose of the Center is to foster a greater understanding of economics. The Center represents an important link between the University, business, and education communities. As part of its activities, the Center undertakes research projects, sponsors conferences and seminars, provides courses in economic education for teachers, and disseminates economic data and information.

Established in 1982 as one of eight centers located throughout the State University System, the Center is located in DM 314, University Park. Its phone number is 348-3283.

## Center for Educational Development

The Center for Educational Development (CED) is a multidisciplinary unit based in the College of Education whose mission includes: (1) planning, technical assistance, training and research in support of educational systems development internationally and domestically; (2) increased minority group access to and achievement in educational systems; (3) acquisition of state and external resources for development of educational systems; and (4) multi-institutional collaboration in educational development projects and research.

The Center is governed and supported jointly by Florida International University, Miami Dade Community College, and the University of Miami. It is comprised of two specialized institutes: the International Institute of Educational Development and the Urban Educational Development Institute.

For more information call 940-5820, or Telefax 956-5494, or write to the Executive Director, Center for Educational Development, College of Education, ACI-370, North Miami Campus, Florida International University, North Miami, FL 33181.

## Center for Labor Research and Studies

The Center for Labor Research and Studies (CLR&S) was established in 1971 to promote research, curriculum development and community service in labor relations at the University. Accredited through the University and College Labor Education Association (UCLEA), the Center is one of 51 accredited labor centers in the United States. Its broad mission is to provide "services to workers and their organizations". This broad mission translates into three specific objectives: 1) to provide comprehensive, statewide labor education service; 2) provide internal and applied research programs designed to support faculty research in labor relations, the changing nature of work, and labor education issues; and 3) develop a multidisciplinary credit and non-credit curriculum in labor studies at the University.

As a Type I Center of the Florida State University System, the CLR&S has major responsibility at the University for research on labor relations and the changing nature of work in Florida as well as curriculum development and community service. This responsibility can be met, in part, by following the University's mandate as described in its mission statement: "(to) serve the broad community with special concern for greater Miami and South Florida, enhancing the metropolitan area's capacity to meet its cultural, economic, social and urban challenges."

Since it was founded, the CLR&S has become known nationally for its innovative, statewide, non-credit training programs. These educational activities, which serve over 2,000 students a year, have helped to educate labor and management participants not only in labor relations but have introduced innovations in pension fund administration, dynamics of privatization, and international labor perspectives to local and national audiences.

The Center houses several projects which serve to carry out its research and training functions. Among them are the Minority Workers Project, the Contemporary Labor Issues Conference Series, the Labor and Community Program, and the Applied Research Program. Faculty research is distributed through its various publication series.

A credit certificate in Labor Studies, a Professional Certificate in Labor Studies and Labor Relations, and a Labor Studies Concentration in Liberal Studies are offered as well as conferences, workshops, and consultation and re-

search services. The Center is located in TR-2, University Park, 348-2371.

## Center for Management Development

The Center for Management Development, located in the office of the Dean, College of Business Administration, was created by the Board of Regents in 1980.

### Contract Training

Management training and executive development programs are provided in the community and at the North Miami Campus. Programs are created to meet the unique training needs of each client. Faculty/trainers use highly interactive, practical, and industry-specific activities aimed toward developing job-related competencies. Certificates, Continuing Education Units (C.E.U.'s), and Nurses Contact Hours may be earned.

### Microcomputer Workshops

Located in North Miami Campus, this lab is equipped with IBM personal computers. The programs offered include:

Introduction to Microcomputers

Spreadsheets

Word Processing

Business and Accounting Applications

Data Base Management

### Technical Assistance and Consultation

The Center is a clearing house for matching a variety of faculty resources to complex and specialized needs of the community. It draws on a variety of disciplines in the College of Business Administration to serve the private and public sectors.

### Certificate Programs

Professionals who desire to upgrade their knowledge and skills will benefit from participating in the appropriate Certificate program. Currently non-credit certificates may be earned in:

Personnel Administration

Training & Human Resource Development

Management

Marketing

The Center is located in ACII 310, North Miami Campus 940-5825.

## Drinking Water Research Center

The Drinking Water Research Center (DWRC), the only facility of its kind in the State of Florida, is primarily devoted to conducting scientific research and developing essential technologies which can be used to provide quality drinking water. Among the Center's areas of investigation are:

Water Treatment-evaluating treatment processes; conducting research on the reactions that lead to formation of potentially carcinogenic compounds during water disinfection with chlorine; evaluating alternative disinfectants and their effect on water quality; researching the use of high energy electrons in water, wastewater and hazardous waste treatment.

Surface Water Quality-examining biological sources of acid rain; studying treatment of domestic, industrial and hazardous wastes since improper disposal can affect surface water quality.

The Everglades-examining nutrient loading and ecosystem response; studying ground water movement with changes in drainage canal levels; examining the question of microbiologically mediated chemical processes; all to help bring understanding about how changes in conditions in the Everglades will affect the water quality in the Biscayne Aquifer, the source of South Florida's water.

Although the Center receives support from the state, its research is primarily funded through research grants or contracts awarded to individual research projects. Funding has been received from the U.S. Environmental Protection Agency, the South Florida Water Management District, The Everglades National Park, the Dade County Department of Environmental Resources Management, local water utilities and private companies.

While the Center has a complete array of instrumentation for the water quality analyses necessary in the course of its research projects, time and staff constraints do not permit routine testing of water for individuals.

The DWRC does not conduct academic classes. However, qualified students often have an opportunity to work as a research assistants in the DWRC laboratories or carry out independent research projects. Cooperation and interchange with other departments in the University is stressed.

The Center is part of the College of Engineering and Design and is located in VH 326, University Park, 348-2826.

## Elder's Institute

The Elder's Institute, a continuing education unit within the Southeast Florida Center on Aging, serves the educational needs of the senior adults on the University's North Miami Campus. The Institute's mission and scope is to initiate, plan, design, and manage non-credit short courses, lectures, seminars, and workshops for the retired older learner. Programs are offered during daytime hours, on campus. The courses offered are primarily in the humanities, the behavioral sciences and the social sciences. Workshops and seminars provide opportunities to develop new skills and to explore methods and means for personal growth and self-improvement. The Institute's instructional staff are community experts, University faculty and retired seniors. The participants are motivated learners who seek knowledge, new information and skills for intellectual stimulation and personal growth. Additional benefits are increased social opportunities which can lead to new friendships and meaningful relationships. The Institute also serves as a resource for community agencies and professionals in the field of gerontology. The Institute is located in ACI-383B, North Miami Campus, 940-5910.

## English Language Institute

Since 1978, the English Language Institute (ELI) has offered non-credit English language instruction to non-native speakers of English in the community and from abroad.

Classes in reading, grammar, writing, and conversation are taught at five levels of proficiency. Language laboratory facilities are available in which students can increase their listening comprehension and speaking skills under the guidance of an instructor. Students normally take a full, four-course load, but it is also possible for fully admitted University students to take a course in a single skill.

### Testing and Placement

The English Language Institute offers proficiency testing of both written and oral proficiency in English as a support service for academic units throughout the University. Evaluative procedures are designed to fit the needs of individual programs or schools, to assist them in the identification of individual students' level of proficiency in English, and to place students in appropriate pro-

grams of study when needed. In addition, the Testing and Placement Center regularly administers the Test of English as a Foreign Language (TOEFL) and the Test of Spoken English (TSE) for members of the University and Dade County school communities. Finally, the Center provides certification in oral English proficiency through the FIU Oral English Proficiency Exams in cooperation with English language agencies abroad.

### ESL Evening and Saturday Program

The English Language Institute offers non-credit courses in the evening and on Saturday for non-native speakers of English.

### Accent Reduction

Accent reduction classes are available for non-native speakers of English who a have a good command of the language but who wish to improve their pronunciation.

The English Language Institute is located in PC 316, University Park, 348-2222.

## FAU-FIU Joint Center for Environmental and Urban Problems

The establishment in July 1972 of the Joint Center for Environmental and Urban Problems at Florida International University and Florida Atlantic University was based on the premise that many of Florida's environmental and urban problems are interrelated growth management problems. The headquarters of the Joint Center are located on the Broward campus of FAU at the University Tower in Fort Lauderdale with branch offices on FIU's North Miami Campus and FAU's Boca Raton campus.

An associate director, research associate, and secretary staff the FIU office. Part-time research associates and assistants supplement the full-time staff, as do University faculty members on individual research projects.

The Joint Center functions as an applied research and public service facility that carries out programs supportive of local, regional and state agencies, educational institutions, and non-profit organizations. The Center achieves its purposes through activities in the following program areas: (1) in-house research with application to state, regional, and local governments; (2) research projects, supported by grants and contracts with public and private agencies, that address environmental and urban problems; (3) applied research grants awarded to faculty at the two universities; (4) publication of the Joint Center's quarterly publication, Environmental and Urban Issues, and growth management monograph series; (5) production, in conjunction with FIU's Media Services, of television documentaries and public service messages concerning selected urban and environmental topics; and (6) workshops, assemblies, conferences and lectures.

### Research

Recent research undertaken at the FIU office of the Joint Center includes: a study of East Everglades environmental management for the Environmental Protection Agency and Urban Land Institute; analysis of public opinion on transportation issues for the Florida Department of Transportation; development of an implementation strategy for an affordable housing density bonus program in Palm Beach County; and development of a housing impact assessment model for large, regional developments.

Each year the Joint Center provides grants to support faculty research in urban and environmental problems. Recent awards to FIU faculty have supported research in database design for geographic information systems and economic modeling of the Miami-Fort Lauderdale economy.

### Service

In cooperation with local, regional and state agencies, and with private organizations, the Joint Center has organized, directed, and staffed conferences for public officials and community leaders on issues of agricultural land retention, protection of drinking water supplies, and growth management. In conjunction with FIU's Media Services, television documentaries concerning coastal management issues, agricultural land retention and the lives of two nationally prominent environmental leaders in Florida have been produced and distributed for public education purposes. The FIU office of the Joint Center is located in AC-I, Room 370, North Miami Campus, 940-5844.

## The FIU Institute of Government

The Institute of Government, as a part of the School of Public Affairs and Services, provides technical assistance, consulting services, policy forums and executive leadership development programs to municipal, county and state administrators, staff members, appointees and elected officials in Dade, Monroe, and Broward counties. The program draws the University together with the community in which it resides, and couples ideas and skills from many disciplines with working governments.

Upon request, the Institute develops and delivers specialized training for governmental units to address any needs they have identified. The training is developed in consultation with the clients and can be delivered at their site or the University.

The Institute arranges technical assistance and consulting services when governments feel they would benefit from outside support. They might, for example, be seeking to solve an internal problem, to gather and analyze research data pertinent to their operation, or to carry out an evaluation of some segment or all of their operation.

The Institute holds conferences and workshops as a forum for community discussion about and analysis of policy issues of concern to local governments in the South Florida area.

The Institute develops and carries out executive leadership development through a number of programs, such as, the annual Executive Leadership Development Mentoring Program. This program links upper-level public administrators and elected officials with less-experienced administrators and officials, in a year-long program starting each fall, to provide personal and professional growth for each individual

## International Institute for Housing and Building

The International Institute for Housing and Building is established by the College of Engineering and Design, to provide expertise in the design, engineering, architectural, and management aspects of construction. The Institute provides academic research, and service programs to Southeast Florida, Latin America, the Caribbean, and developing nations throughout the world.

The Institute emphasizes the following activities related to housing environment.

1. To initiate and carry out research on problems related to building planning and construction, considering especially the technology, economic, financial, and managerial aspects of the topic.

2. To generate funds from outside sources to finance theoretical and applied research activities.

3. To disseminate the results of research projects and encourage their implementation.

4. To provide technical services to private and official organizations with a special emphasis on service to the housing production industries of South Florida and in international context.

5. To act as an interface between new developments in Housing Science and their application in the field of housing and planning in South Florida and to assess their relevance to the housing industry.

6. To collect documents and disseminate information on the latest advances in building science and housing.

7. To attract researchers of the international stature and reputation to the University and South Florida.

8. To develop a learning environment in the area of building sciences relevant to the needs of low- and medium-income people of the world.

9. To collaborate with other research institutes, government agencies, and universities to increase the effect of its research program.

10. To organize scientific meetings, symposia conferences, seminars, and workshops at the University and elsewhere.

11. To incorporate the use of alternative energy, energy conservation, and efficient use of natural resources in the planning of large projects, and to encourage the utilization of indigenous materials and labor sources.

12. To help implement programs to alleviate the impact of various disasters on housing including the coordination of disaster preparedness activities related to housing.

An underlying concern of the Institute is to establish an interdisciplinary environment in which many disciplines within the University and the community can arrive at feasible solutions to housing and building problems. It is located in VH 176, University Park, 348-3171.

## Institute of Judaic Studies

The Institute of Judaic Studies (IJS) brings the University and the community together in a mutual effort to nurture teaching and research in academic areas which stand as the cornerstones of Western Civilization. The objective of the Institute is to infuse Jewish content into the curriculum of the University at all appropriate levels. Contemporary issues and problems provide focal points for study, dialogue, exchange and travel. The Institute fosters scholarship and inquiry into Jewish themes leading to the development of course offerings within existing academic departments. For more information, call 348-3225.

## Institute for Public Policy and Citizenship Studies

The Institute for Public Policy and Citizenship Studies was founded in 1985 to offer students, faculty, and the community alternative learning opportunities in public policy and citizenship development. Four key objectives have guided the Institute's programs:

1. To provide non-traditional educational opportunities to the student body on the responsibilities and opportunities of citizenship.

2. To assist students and faculty in understanding the impact that public policy has on their daily lives and in their career pursuits.

3. To promote interdisciplinary research efforts among faculty on local and national policy matters.

4. To encourage joint university and community efforts on local policy issues.

The Institute sponsors the Student Honors Mentor Program, a semester-long opportunity for students to meet and interact with peers and faculty members from other academic disciplines. The Mentor Program encourages participants to examine a public policy issue in a small group setting through discussions, research, or innovative projects. In providing an alternative mode of learning, the Institute hopes to give students practical experience in community decision-making and problem-solving.

The Institute also sponsors and supports a variety of programs through which FIU students provide community service. One such program is the Student Literacy Corps, in Dade County Public Schools' reading and writing skills to illiterate citizens. Other programs address environmental issues, citizen participation in government, and inter-generational projects.

The Institute also works in cooperation with other FIU centers, including the Women's Studies Center, The Center on Aging, The Labor Center, and The Latin American/Caribbean Center.

In addition, the Institute sponsors conferences and events focusing on key policy issues that are salient within our local community. Nationally known speakers and University faculty are invited to present their research findings and perspectives on a variety of issues ranging from citizenship education in Dade County to the ethical implications of an aging society to the impact of government regulations on the fishing industry. The conferences are designed to offer the public and university community additional resources in understanding the policy problems that we, as a community, face on a daily basis.

The Institute is located in PC 242, University Park, 348-2977.

## Latin American and Caribbean Center

The Latin American and Caribbean Center (LACC) promotes advanced education and research on Latin America and the Caribbean, a region of intense interest to the United States. LACC offers undergraduate and graduate certificate programs to both degree and non-degree seeking students, sponsors and promotes faculty research in the region, and offers public education programs on Latin America and the Caribbean to enhance inter-American understanding.

Since it was founded in 1979, LACC has become one of the country's leading programs in Latin American and Caribbean studies. Over 90 language and area studies faculty regularly offer nearly 100 courses on diverse topics. Special seminars on the Latin American debt and business environment as well as other socio-political and historical issues complement LACC's efforts. Externally funded research programs have supported a continual flow of visiting Latin American scholars to the University and gifts from the local community have helped the University to build a strong Latin American and Caribbean studies library collection.

LACC regularly places students in foreign study programs and local internships. More information is available in PC 237, University Park, 348-2894.

## Institute for Public Opinion Research

The Institute for Public Opinion Research (IPOR), a research arm of the School of Journalism and Mass Communication, conducts public opinion polls from its survey research lab on the North Miami Campus. The institute was founded in 1983 and was quickly recognized by public and private organizations throughout South Florida as a

valuable survey research resource. IPOR's primary function is to provide public policy decisions-makers with timely and relatively inexpensive information on how a scientifically-selected cross-section of the public stands on various policy issues. Ways in which IPOR is fulfilling this function include:

1. The annual FIU/Florida Poll which is the most comprehensive public opinion survey conducted in the state. The FIU/Florida Poll asks Floridians about the important issues facing them - crime, education, transportation, health, taxes, politics, etc. - and asks many of the questions year after year, providing valuable longitudinal information not before available. The publication in book form of the results of the FIU/Florida polls provides public officials, academics, businessmen, and the general public with a ready reference resource about opinion in the state. The information provided in the FIU/Florida Poll books is unique in the United States, and gives planners and decision makers in Florida an additional valuable information resource.

2. IPOR provides survey research expertise to members of the FIU community needing such expertise in conjunction with their official duties at the university. This includes assistance in the preparation of research proposals which call for survey research, provided that the survey research part of the project, if funded, is conducted under subcontract by IPOR in cooperation with the director of the funded project.

3. IPOR's staff and facilities are available in support of instructional activities at the graduate and undergraduate level involving public opinion research and survey research methodology.

4. IPOR continues to seek external funding in support of its long-standing interest in the area of public-policy communication. That may, for example, include the development of an annual South Florida survey, development of a standard metropolitan area assessment instrument which would be readily available to major cities and counties in the state, or development of a standard instrument by which state and local legislators can quickly and inexpensively gauge the sentiments of their constituents on policy issues.

5. IPOR, in cooperation with the Central American Journalism Project of the SJMC, involves itself in the development of affordable and scientifically acceptable survey research methodology usable in the developing democracies of Latin America and the Caribbean.

IPOR is located in Academic One, Room 266, on the North Miami Campus. For more information call 940-5991.

## Center for Multilingual and Multicultural Studies

The Board of Regents established the Center for Multilingual and Multicultural Studies as a center of excellence in order to improve the quality of foreign language, bilingual education, linguistics, and multicultural programs offered in the State.

The main purpose of the Center is to develop, plan and coordinate research and training programs in the areas of foreign languages and literature, linguistics, bilingual education, multicultural approaches to the humanities in international and domestic contexts, and international studies. Its primary research programs focus on language policy, migration, and ethnicity.

The Center houses several projects which serve to carry out its research and training functions. Among these are the African-New World Studies initiative and the documentary project: Living History: A Reflection on the Cuban Nation and Exile.

### Cuban Exile History and Archives Project

The Cuban Exile Archives collects rare imprints, manuscripts, audiovisuals, ephemeral, artifacts, recorded oral testimonies and machine readable records illustrating and documenting the Cuban-American heritage. It seeks to disseminate them through historical research by members of the University, other area institutions, and the general public. The resulting research is published in Cuban Heritage: A Journal of History and the Humanities which appears quarterly. The preservation of the Cuban community's living testimony through the techniques of oral history is also one of the Project's main concerns. The Project encourages the donation of historically significant materials to the Cuban Exile Archives or to other appropriate repositories.

## Small Business Development Center

The Small Business Development Center (SBDC) is a program designed to provide comprehensive small business management and technical assistance to the small business community. The Center serves as a focal point for linking resources of the federal, state, and local governments with those resources of the University and the private sector. These resources are utilized to counsel and train small businesses in resolving start-up, organizational, financial, marketing, technical, and other problems they might encounter.

The Small Business Development Center is a basic services center. It disseminates business management information, performs financial analyses and management audits, assists in market and feasibility studies, and provides business management counseling and training.

In June 1980, the SBDC started actively fulfilling its mission to the small business community of greater Miami area by providing counseling services and training programs to the public. In the past year, the SBDC staff provided 4,530 people from the community with small business management training. Also, the Center counseled 3,100 persons in starting and managing their small businesses during the same period.

The Center also attracts many clients through its special services such as INFO-BID and the Florida Innovation Program. These services are designed to provide, respectively, leads for government and private contracts to Florida small businesses and assistance to the inventor/entrepreneur. In addition, we provide businesses interested in exporting assistance through our International Trade Center.

The SBDC is actively involved in promoting community relations for the University through the activities of its staff with Chamber of Commerce, trade associations, and community-based organizations. These activities include serving on committees and numerous speaking engagements.

The Center is located in Trailer MO-1, University Park, 348-2272, ACI 350, North Miami Campus, 940-5790, and 46 SW 1st Avenue, Dania, 987-0100.

## Southeast Florida Center on Aging

The Southeast Florida Center on Aging offers a multi-disciplinary program in gerontology with a unique public sector focus. It is the mission of the Center to serve as a focal point for applied public policy research, to design and implement comprehensive gerontological education and training program for students, professionals and older learners, and to demonstrate concepts to serve older persons. The Center seeks to achieve its goals through a wide variety of educational activities designed to further the pursuit of knowledge and understanding about aging in today's society, with particular emphasis upon the

development, implementation, and evaluation of public policy.

### Objectives

The Center supports, sponsors, conducts, and participates in a wide range of activities aimed at improving the quality of life for older people of South Florida. Pursuant to its mandate for education and training, research and community service, the Center is engaged in:

1. Development of gerontology education across disciplines throughout the University community.

2. Expanded opportunities for training and professional development of persons working with or planning to work with older people.

3. Aging research, with special emphasis on current and future public policy in the area of long term care.

4. A wide range of lifelong learning and educational opportunities for older people.

5. Technical assistance and support to public agencies and community organizations aimed at improving the effectiveness of programs for older people.

The center consists of three components:

**Research:** Focus on applied public policy research as well as promotion of research involving faculty from a variety of disciplines within the University. There is an emphasis on potential applications of research findings by policy makers and health and social sciences practitioners.

**Education and Training:** Organization, in close collaboration with the academic departments, of credit and non-credit certificate programs for undergraduate and graduate students and for practitioners in the field of aging. Delivery of training seminars and workshops both at the University and at locations throughout Southeast Florida.

The Elders Institute, a continuing education program, offers a broad array of continuing education courses for the older learner and is exploring development of additional educational and cultural activities for older persons.

**Program Development and Technical Assistance:** Design of innovative concepts and programs that further public policy objectives to expand opportunities for older people or to improve the delivery of health and social services to them. The Center provides assistance and support for agencies and organizations serving older people throughout Florida.

The Center is located in ACI 383, North Miami Campus, 940-5550.

## Women's Studies Center

The Women's Studies Center serves as a University resource on the specialized concerns and academic interests of women. A major focus of the Center is the interdisciplinary Certificate Program in Women's Studies which provides support for the certificate faculty committee and the development of the program.

The Certificate in Women's Studies was established to provide an opportunity for the interdisciplinary study of the historical, political, economic, literary, social, and cultural roles of women; and of the function of gender in various societies and cultures. The program is directed toward specialists and generalists alike: it offers a plan of study for students in the various departments who wish to earn a certificate in women's studies, and it welcomes students who wish to enroll in its courses without fulfilling the requirements for the certificate.

The Center provides a place and opportunity to foster women's progress through such activities as referrals, counseling, peer groups, access to studies and research on women's learning and culture, and assistance on issues of gender inequality. The Center offers seminars, conferences, lecture series, and related events on both academic and women's issues topics.

The Center is located in DM 212, University Park, 348-2408.

## Florida's Statewide Course Numbering System

The course numbers appearing in the catalog are part of a statewide system of prefixes and numbers developed for use by all public post-secondary and participating private institutions in Florida. One of the major purposes of this system is to make transferring easier by identifying courses which are equivalent, no matter where they are taught in the state. All courses designated as equivalent will carry the same prefix and last three digits.

The classifying and numbering of courses is done by faculty in each academic discipline. Their work is reviewed by all of Florida's postsecondary institutions who make suggestions and criticisms to be incorporated into the system.

The course numbering system is, by law, descriptive and not prescriptive. It in no way limits or controls what courses may be offered or how they are taught. It does not affect course titles or descriptions at individual schools. It seeks only to describe what is being offered in post-secondary education in Florida in a manner that is intelligible and useful to students, faculty, and other interested users of the system.

The course numbering system was developed so that equivalent courses could be accepted for transfer without misunderstanding. Each public institution is to accept for transfer credit any course which carries the same prefix and last three digits as a course at the receiving institution. For example, if a student has taken SYG 000 at a community college, he cannot be required to repeat SYG 000 at the school to which he transfers. Further, credit for any course or its equivalent, as judged by the appropriate faculty task force and published in the course numbering system, which can be used by a native student to satisfy degree requirements at a state university can also be used for that purpose by a transfer student regardless of where the credit was earned.

It should be noted that a receiving institution is not precluded from using non-equivalent courses for satisfying certain requirements.

### General Rule for Course Equivalencies

All undergraduate courses bearing the same alpha prefix and last three numbers (and alpha suffix, if present) have been agreed upon to be equivalent. For example, an introductory course in sociology is offered in over 40 post-secondary institutions in Florida. Since these courses are considered to be equivalent, each one will carry the designator SYG 000.

### First Digit

The first digit of the course number is assigned by the institution, generally to indicate the year it is offered: 1 indicates freshman year, 2 indicates sophomore year, etc. In the sociology example mentioned above, one school which offers the course in the freshman year will number it SOC 1000; a school offering the same course in the sophomore year will number it SOC 2000. The variance in first numbers does not affect the equivalency. If the prefix and last three digits are the same, the courses are substantively equivalent.

### Titles

Each institution will retain its own title for each of its courses. The sociology courses mentioned above are titled at different schools 'Introductory Sociology,' 'General Sociology', and 'Principles of Sociology'. The title does not

affect the equivalency. The courses all carry the same prefix and last three digits; that is what identifies them as equivalent.

### Lab Indicators

Some courses will carry an alpha suffix indicating a lab. The alpha suffixes 'L' and 'C' are used as follows to indicate laboratories: 'L' means either (a) a course, the content of which is entirely laboratory or (b) the laboratory component of a lecture-lab sequence in which the lab is offered at a different time/place from the lecture.

'C' means a combined lecture-lab course in which the lab is offered in conjunction with the lecture at the same time/same place.

### Examples

| | |
|---|---|
| Marine Biology | OCB 013 (lecture only) |
| | OCB 013L (lab only) |
| Marine Biology | OCB 013C (lecture and lab combined) |

Therefore, OCB 013C is equivalent to OCB 013 plus OCB 013L.

### Equivalency of Sequences

In certain cases, sequences of courses in a given discipline are equivalent rather than the individual courses which make up these sequences. (For example, CHM _045 plus CHM _046). In several institutions students have completed substantively equivalent content. These sequences are clearly identified in the Course Equivalency Profiles.

### Explanation of Prefixes and Numbers

Prefixes and numbers in the course numbering system are not chosen at random; they are designed to describe course content in an organized fashion within a classification system developed for each subject matter area.

Generally, each of the major classifications in a discipline is represented by a three-alpha prefix. In some cases, one three-alpha prefix has been sufficient for the entire discipline. A discipline may use as many prefixes as necessary to accommodate its major classifications. The logic of the system allows it to be infinitely expandable with minimal disruption to existing numbers.

History, for example, has seven prefixes: AFH, African History; AMH, American History; ASH, Asian History; EUH, European History; HIS, History - General ; LAH, Latin American History; and WOH, World History. All history courses in the state will carry one of these prefixes.

A complete inventory of taxonomic listings, equivalent and unique courses has been made available to each academic department of every institution in the state. Students, through their local advisors, should use this information in designing programs which will transfer smoothly.

A more specific example is AMH 3421 (Early American History)

| | |
|---|---|
| **AMH** | Broad Area of American History; part of discipline of History |
| **3** | Junior level offering (at this particular institution) |
| **4** | In Taxonomy for AMH 400 series indicates 'Areas in American History' |
| **2** | In Taxonomy for AMH this digit indicates courses in 'History of Florida' |
| **1** | Last digit in this case refers to group of equated courses dealing with 'Early History of Florida' |

### Exception to the Rule for Equivalencies

The following are exceptions to the general rule for course equivalencies:

1. All numbers which have second digit of 9 (Ex.: ART 2906) are 'place keeper' numbers for such courses as directed independent study, thesis hours, etc. Courses with 900 numbers must be evaluated individually and are not automatically transferable.

2. All internships, practicum, clinical experiences and study abroad course, whatever numbers they carry, are not automatically transferable.

3. Performance or studio courses in Art, Dance, Theatre, and Music are not automatically transferable, but must be evaluated individually.

### Authority For Acceptance of Equivalent Courses

Authority for acceptance of equivalent courses is State Board of Education Rule 6A-10.24(16) which states:

(16) When a student transfers among postsecondary area vocational-technical centers, community colleges, and universities, the receiving institution shall award credit for courses satisfactorily completed at the previous institutions when the courses are judged by the appropriate common course designation and numbering system faculty task force to be equivalent to courses offered at the receiving institution and are entered in the course numbering system. Credit so awarded can be used by transfer students to satisfy certificate and degree requirements in these institutions on the same basis as native students.

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## Centers and Institutes

*Director, Center for Accounting, Auditing, and Tax Studies* **Felix Pomeranz**
*Director, Center for the Administration of Justice* **Luis Salas**
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*Director, Center for Management Development* **Willabeth Jordan**
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*Director, Elders Institute* **Diane Otis**
*Director, English Language Institute* **Charlotte K. Al-Jamal**
*Director (Acting), FAU-FIU Joint Center for Environmental and Urban Problems* **Thomas D. Wilson**
*Director, FIU Institute of Government* **Milan J. Dluhy**
*Director, Institute for Judaic Studies* **Stephen Fain**
*Director (Acting), Institute for Public Policy and Citizenship Studies* **John F. Stack**
*Director, Institute for Public Opinion Research* **J. Arthur Heise**
*Director, International Institute for Housing and Building* **Oktay Ural**
*Director, Latin American and Caribbean Center* **Mark B. Rosenberg**
*Director (Acting), Multilingual and Multicultural Studies Center* **Tanya Saunders-Hamilton**
*Director, Small Business Development Center* **Marvin Nesbit**
*Executive Director, Southeast Florida Center on Aging* **Max B. Rothman**
*Director, Women's Studies Center* **Marilyn Hoder-Salmon**

# College of Arts and Sciences

The College of Arts and Sciences furthers the study of fundamental intellectual disciplines, and serves the University's other Colleges and Schools. The College grants Bachelor's, Master's, and Ph. D. degrees. In addition, the College serves students who need to complete general education and core curriculum requirements, and other requirements, in order to enroll in specific disciplines or professional programs.

The College is composed of eighteen departments, in addition to the School of Computer Science, the School of Journalism and Mass Communication, and three interdisciplinary programs.

### Undergraduate Programs

The College offers departmental programs of study leading to Bachelor's degrees in biological sciences, chemistry, communication (advertising, broadcasting, journalism, public relations, ), computer science, economics, English, geology, history, international relations, mathematical sciences, mathematics, modern languages (French, German, Portuguese, and Spanish), music, philosophy and religious studies, physics, political science, psychology, sociology and anthropology, statistics, theatre, and visual arts. The College also offers programs of study leading to Bachelor's degrees in environmental studies, humanities and liberal studies. A labor studies concentration is available in the liberal studies program.

Minor programs of study are offered in advertising, art history, biology, broadcasting, chemistry, computer science, dance, economics, English, French language and culture, general translation studies, geology, geography, history, humanities, journalism, international relations, mass communication, mathematical sciences, mathematics, music, philosophy, physics, political science, Portuguese, psychology, public relations, religious studies, sociology and anthropology, Spanish language and culture, statistics, theatre, and visual arts.

### Certificate Programs

Students can earn through the College certificates in: Actuarial Studies, American Studies, Consumer Affairs, Environmental Studies, Ethnic Studies, Gerontological Studies, International Studies, Labor Studies, Labor Studies and Labor Relations, Latin American and Caribbean Studies, Legal Translation and Court Interpreting, Linguistic Studies, Student Media Advising, Translation Studies, Tropical Commercial Botany, Western Social and Political Thought, and Women's Studies.

### Admission

FIU freshmen and sophomore students may be coded with an "intended" major in the College upon earning 24 semester hours.

They may be fully admitted to the College if they have earned 60 semester hours, have a cumulative grade point average (GPA) of 2.0 and have passed the CLAST. Full admission to the College is accomplished by filing the form "Request for Acceptance into Upper Division College/School".

A transfer student with an Associate in Arts degree from a Florida community college, or having completed the equivalent coursework at a four year institution with a minimum of 60 semester hours earned, having a cumulative grade point average (GPA) of 2.0 and having passed the CLAST, may be admitted to a program in the College. Applicants must submit an Application for Admission to the University and must follow the regular University procedures. Applicants must be eligible for admission to the University before admission to the College.

All students are encouraged to seek advising as early as possible in the department/program of their choice, even if they have not yet been fully admitted into that major.

### College Requirements for a Baccalaureate Degree

Candidates to the Bachelor's degree must satisfy individual departmental requirements, and the following College requirements, in addition to the University-wide requirements:

1. A minimum of 120 semester hours in acceptable coursework is required.

2. At least half of the upper division credits in any major must have been taken in residence at the University.

3. In the last 60 semester hours of enrollment, the student must earn nine semester hours of elective credits through coursework outside the major; six of which are to be taken outside the department sponsoring the program.

4. Earn a grade of "C" or higher in all courses required for the major. A grade of "C-" or lower is not acceptable in any required course.

5. Of the total number of hours submitted for graduation, a minimum of 50 semester hours must be in upper division courses. Additionally, the student may submit, with departmental approval, up to ten semester hours of lower division courses taken at the University.

### College Requirements for a Minor

Students who desire to earn a minor must satisfy individual departmental/program requirements, and the following College requirements:

1. At least half of the courses used to fulfill the requirements must have been taken at the University.

2. Earn a grade of "C" or higher in all courses required for the minor. A grade of "C-" or lower is not acceptable in any required course.

3. Of the courses used to fulfill the requirements, at least half of them must be at the upper division level and preferably should include a minimum of one course at the 4000 level.

*Note*: The programs, policies, requirements, and regulations listed in this catalog are continually subject to review in order to serve the needs of the University's various publics and to respond to the mandates of the Florida Board of Regents and the Florida Legislature. Changes may be made without advance notice. Please refer to the General Information section for the University's policies, requirements, and regulations.

## Biological Sciences

**Walter M. Goldberg,** *Professor and Chairperson*
**Charles Bigger,** *Associate Professor and Chair of Graduate Studies*
**Chun-fan Chen,** *Associate Professor*
**Helen Correll,** *Research Scientist*
**Leon A. Cuervo,** *Professor*
**George H. Dalrymple,** *Associate Professor*
**Kelsey Downum,** *Associate Professor*
**Jack B. Fisher,** *Research Scientist*
**Kenneth Gordon,** *Associate Professor*
**Rene Herrera,** *Assistant Professor*
**William Houghton,** *Research Scientist*
**Ronald D. Jones,** *Associate Professor*
**Suzanne Koptur,** *Associate Professor*
**David N. Kuhn,** *Assistant Professor*
**David W. Lee,** *Associate Professor*
**John Makemson,** *Professor*
**Gerald L. Murison,** *Professor*
**Knut W. Norstog,** *Research Scientist*
**Steven F. Oberbauer,** *Assistant Professor*
**Case K. Okubo,** *Associate Professor*
**John Popenoe,** *Research Scientist*
**L. Scott Quackenbush,** *Assistant Professor*
**Jennifer Richards,** *Associate Professor*

**Laurie L. Richardson,** *Assistant Professor*
**Roger Sanders,** *Research Scientist*
**Martin L. Tracey,** *Professor*
**Peter C. Walnwright,** *Assistant Professor*
**Ophelia I. Weeks,** *Assistant Professor*

## Bachelor of Science

### General Science Requirements Lower Division

#### Required Courses

Six semester hours of lectures and two semesters of laboratories in each of the following areas: general biology, general chemistry, general physics and organic chemistry; Calculus I and II or Statistics I and II.

#### Recommended Courses

Foreign language and calculus.

To qualify for admission to the department, FIU undergraduates must have met all the lower division requirements including CLAST, completed 60 semester hours, and must be otherwise acceptable to the department.

### Upper Division Program

Required Courses

| | | |
|---|---|---|
| 1.PCB 3043 | Ecology | 3 |
| 2.PCB 3513 | Genetics | 3 |
| 3.BCH 3023+L | General Biochemistry | 5 |
| | or | |
| PCB 3203+L | Cell Physiology | 4 |
| | or | |
| PCB 4723+L | Animal Physiology | 4 |
| | or | |
| BOT 4504+L | Plant Physiology | 4 |
| | or | |
| MCB 4404+L | Microbial Physiology | 4 |
| | or | |
| PCB 4724+L | Comparative Physiology | 4 |
| 4.BSC 4931 | Senior Seminar | 1 |
| 5.Biology Electives [1,2,3] | | 5 courses |
| 6.Laboratory Requirement[4] | | 4 Labs |
| 7.Electives | | 29-30 |

[1]APB 1102C, APB 2863, APB 2170, APB 3253, APB 4864, BSC 2023, BSC 3241, BSC 3915, BSC 3949, BSC 4919, BSC 4949, and EVR 3013, are not applicable to this requirement.

[2]Electives will be chosen in consultation with faculty advisor.

[3]At least one course must be taken from each of two groups: Cellular Physiological Group, (BCH 3023, 5280; BOT 4374, 4504, 5515, 5575, 5935; MCB 4203, 5505; MCB 4404, OCB 5635; PCB 3203, 3702, 3703, 3704, 4024, 4233, 4254, 4524, 4723, 5195, 5205, 5259, 5615, 5666, 5777, 5835; ZOO 3753) and Organismal Field Biology Group (BOT 2010,3153, 3353, 3723, 3810, 4374C; BSC 4254, 4934,5215, 5345, 5606, 5825, 5935; ENY 3004; MCB 3023, 4603; OCB 2005, 5635; PCB 4303, 4673, 5676, 5677, 5686, 5687; ZOO 3203, 3603, 3731, 3733, 3734, 3892, 4423, 4713, 4743, 5376, 5745)

[4]Laboratory requirement is met with four upper division Biology labs from PCB 3043, 3513, and any of the lab electives. This does not include the lab in requirement 3.

Students interested in teacher certification should contact the College of Education at 348-2721.

## Special Programs

### Bachelor of Science with Honors

#### Admission to the Program

a. Permission of the department. Application should be made by letter to the Curriculum Committee from the applicant after completion of two semesters at the University and prior to two semesters before graduation. The letter should state the intended research problem and be countersigned by the Thesis Committee (advisor and mentor).

b: A minimum GPA of 3.5 in biology, chemistry, physics, geology, and mathematics courses.

#### Graduation Requirements:

a. A minimum GPA of 3.5 in biology, chemistry, physics, geology, and mathematics courses.

b. Completion of the BS requirements in Biology and Honors Research (BSC 4015, 1 to 3 credits, and Honors Thesis (BSC 4974, 1 credit).

c. Completion of Honors research in collaboration with a two-person Honors Committee, consisting of the honors advisor and one other member. The honors advisor must be a tenured or tenure-earning member of the department. The research results must be written in the form of an honors thesis and approved by the Honors Committee.

d. Deposit two completed approved copies of the Honors Thesis with the Department's Office: one copy to be kept in the department and the other to be deposited in the Library;

e. Presentation of the results of the Honors Research in the Graduate Seminar.

### Minor in Biology

#### Required Courses:

BSC 1010 and BSC 1011 with labs, and three additional courses, one of which must include a lab and one must be on the 4000- level or higher. Minimum credits beyond BSC 1010 and BSC 1011 with labs are 10 credits.

### Pre-Medical, Dentistry, Veterinary Curricula

Programs of study satisfying requirements for admission to colleges of medicine, dentistry, and veterinary medicine are arranged in consultation with a faculty advisor. MAC 3311, CHM 3400, MCB 3023, and ZOO 3603 are recommended as fulfilling the requirements of many professional schools.

A seven year FIU/SECOM program in osteopathic medicine is offered; students must be admitted to FIU and SECOM. Interested students should consult a Biological Sciences advisor.

### Certificate Programs in Marine Sciences and in Tropical Commercial Botany

See section on certificate programs under College of Arts and Sciences.

## Course Descriptions

*Note*: Laboratories should be taken concurrently with or subsequent to lectures. Students should register for each separately.

#### Definition of Prefixes

APB - Applied Biology; BCH - Biochemistry; BOT - Botany; BSC - Introductory Biology; EVR - Environmental Studies; MCB - Microbiology; OCB - Oceanography (Biological); PCB - Process Cell Biology; ZOO - Zoology.

**APB 1102C Introductory Botany (4).** A history of mankind's study and use of plants, and a survey of plants of economic importance. Includes lab. No science prerequisite.

**APB 2863 Foundations of Human Physiology (3)**
**APB 2863L Foundations of Human Physiology Lab (1).** Functional survey of the organ systems of the human body. Intended primarily for non-science majors.

**APB 2170 Introductory Microbiology (3)**
**APB 2170L Introductory Micro Lab (1).** Basic concepts of microbes as pathogens, food spoilage and fermentative organisms. Microbial relationships to immunology, sanitation, pollution and geochemical cycling. Not applicable for majors in Biological Sciences or Medical Laboratory Sciences.

**APB 3253 Human Sexual Biology (3).** Development, structure, and function of

the human organism from a sexual perspective, physio-biology of the adult human sexual response.

**APB 4864 Human Systemic Physiology I (3)**
**APB 4864L Human Systemic Physiology Lab (1).** Selected topics in human physiology with emphasis on topics of clinical significance. Prerequisite: Introductory human physiology or a college level course in biology or chemistry.

**APB 4865 Human Systemic Physiology II (3).** Function of physiological systems with emphasis on integrative aspects and on adaptive responses to physiological stress. Endocrine, renal and digestive systems and metabolism.

**BCH 3023 General Biochemistry (4)**
**BCH 3023L Biochemistry Lab (1).** Chemistry of proteins, lipids, carbohydrates, and nucleic acids; principles of enzymology, metabolism, and bioenergetics. Prerequisite: CHM 3211.

**BCH 5134C Workshop in Chromatography Techniques (1).** Workshop covers the theory and practice of chromatographic techniques to separate complex mixtures of biomolecules, including absorption, ion exchange, size exclusion and affinity chromatography. Prerequisite: Graduate status.

**BCH 5411C Techniques in Molecular Evolution Research (5).** Ribosomal genes from related organisms are amplified by polymerase chain reaction (PCR) and sequenced. Phylogenetic maps are made by computer from sequence data. Students may use material from their own research. Prerequisites: BCH 3023 and Lab, PCB 4524 and Lab or Graduate Status.

**BOT 2010C Plant Biology (4).** An introduction to plant form, function and reproduction: the lives of algae, fungi, bryophytes, ferns, and flowering plants. The course is designed for majors and certificate students; includes a lab.

**BOT 3153C Local Flora (3).** Laboratory observation of the gross features of vascular plants and practice in the use of keys for identification. Basic ecology of principle plant communities of Southern Florida. Field trips.

**BOT 3353C Morphology of Tropical Plants (3).** Origin and evolution of plants, especially vascular plants of tropical origin. Analysis of vascular plant anatomy and morphology, emphasizing the underlying principles of plant construction. Includes Lab. Prerequisite: A course in General Biology or permission of instructor.

**BOT 3353L Morphology of Vascular Plants Lab (1).** Origin and evolution of plants, especially vascular plants of tropical origin. Analysis of vascular plant anatomy and morphology, emphasizing the underlying principles of plant construction. Prerequisite: A course in General Biology or permission of instructor.

**BOT 3723C Taxonomy of Tropical Plants (4).** Introduction to higher plant taxonomy, including nomenclature, modern systems of angiosperm classification, and angiosperm evolution. Emphasis on identification of tropical plant families and plants of economic importance. Course includes lab. Prerequisite: A course in General Biology.

**BOT 3810 Economic Botany (3).** The origins, domestication and uses of economically important plants. Prerequisites: BSC 1010, APB 1102 or equivalent.

**BOT 4374C Plant Development (3).** The development of vascular plants, with emphasis on experimental approach to plant anatomy, morphology, and reproduction. Practical instruction in tissue and organ culture. Includes Lab. Prerequisites: BOT 4504 and permission of instructor.

**BOT 4374L Plant Development Lab (1).** The development of vascular plants, with emphasis on experimental approach to plant anatomy, morphology, and reproduction. Practical instruction in tissue and organ culture. Includes Lab. Prerequisites: BOT 4504 and permission of instructor.

**BOT 4504 Plant Physiology (3)**
**BOT 4504L Plant Physiology Lab (1).** Plant growth and metabolism in relationship to environment. Photobiology, nutrient relations, transport, and hormones in relation to plant development and function. Prerequisite: Organic Chemistry I.

**BOT 5405 Phycology (3).**
**BOT 5405L Phycology Lab (1).** The physiology and ecology of marine and freshwater algae, including morphology, reproduction, and classification of major groups.

**BOT 5515 Biochemistry of Plant Natural Products (3).** Aspects of primary and secondary plant metabolism will be covered including biosynthesis and degradation of natural products as well as their biological/pharmacological activity. Prerequisite: CHM 3211 or BCH 3023.

**BOT 5575 Photobiology (3)**
**BOT 5575L Photobiology Lab (1).** The study of basic photochemical mechanisms as they occur in molecular biological processes such as plant growth, animal vision, bioluminescence, and radiation damage. Prerequisite: Permission of instructor.

**BOT 5605 Plant Ecology (4).** In-depth study of plant ecology at 3 levels: individual, population, and community. Laboratory and field exercises will examine lecture topics.

**BOT 5682C Florida Plant Communities (3).** Two-week field trip to many diverse plant communities of the state. Ecological and environmental factors influencing plant distribution will be examined, contrasting vegetation among sites. Prerequisites: BSC 1010, BSC 3043 or permission of instructor.

**BSC 1010 General Biology I (3)**
**BSC 1010L General Biology Lab (2).** A survey of organismal biology; Microbiology, Botany, and zoology. Science background recommended.

**BSC 1011 General Biology II (3)**
**BSC 1011L General Biology Lab (2).** Biomolecules, cells, energy flow, genetics, and physiology. Science background recommended.

**BSC 2023 Human Biology (3)**
**BSC 2023L Human Biology Lab (1).** Biological and scientific principles governing human structure, function, health, evolution and relationship to the planetary environment. For non-science majors. Concurrent registration in laboratory is required.

**BSC 3915, 4919, 6916, Student Research Lab (1-12).** Independent laboratory study in a project or projects of the student's choice. Registration by consultation with instructor. May be repeated for additional credit.

**BSC 3949, 4949 Cooperative Education in Biology (1-3).** A student majoring in biological sciences may spend several terms fully employed in industry or government in a capacity relating to the major. Prerequisites: Permission of Co-op Education and major department.

**BSC 4374C Plant Development (4).** Development of plant seeds with particular reference to the anatomy, morphology and reproduction of tropical flowering plants of economic importance. Practical instruction in tissue and organ culture and propagation (seeds and soft and woody cuttings). Includes laboratory. Prerequisites: BOT 4504 and permission of instructor.

**BSC 4401 Biotechnology: Applications in Industry, Agriculture and Medicine (3).** Biological, biochemical, ecological, engineering, entrepreneurial,

and ethical aspects of biotechnology in industry, agriculture, and medicine.

**BSC 4915L Honors Research (1-3).** Laboratory and/or field study in consultation with an Honors Thesis advisor. Prerequisite: Science and Math GPA 3.5.

**BSC 4931 Senior Seminar (1).** An exploration of various research works in biological sciences. Oral presentation by the students required.

**BSC 4934 Topics in Biology (1-3).** An intensive study of a particular topic or limited number of topics not otherwise offered in the curriculum.

**BSC 4974 Honors Thesis (1).** Writing an Honors Thesis. Prerequisite: BSC 4915.

**EVR 3013C Ecology of South Florida (3)**
**EVR 5051 Ecology of South Florida (3).** (See listings under Environmental Studies.)

**ENY 3004 General Entomology (3)**
**ENY 3004L Entomology Lab (1).** The morphology, systematics, physiology and ecology of the major insect orders, and introduction to basic field procedures. Prerequisite: BSC 1011.

**MCB 3023 General Microbiology (3)**
**MCB 3023L General Microbiology Lab (1).** Introduction to the principles and techniques of microbiology, genetics, taxonomy, biochemistry and ecology of microorganisms. Prerequisites: One semester of Organic Chemistry; two courses in Biology.

**MCB 3801 Mycology (3)**
**MCB 3801L Mycology Lab (1).** An introduction to the taxonomy, genetics, and physiology of fungi with special emphasis on commercially important fungi and plant animal pathogenic fungi. Prerequisites: Two semester of General Biology (BSC 1010, Bsc 1010L, BSC 1011, and BSC 1011L).

**MCB 4203 Microbial Pathogenicity (3)**
**MCB 4203L Microbial Path Lab (1).** Host-parasite relationships: physiology of bacterial, fungal and viral pathogens emphasizing mechanisms of pathogenicity and the host response. Prerequisites: MCB 3023

**MCB 4404 Microbial Physiology (3)**
**MCB 4404L Microbial Physiology Lab (1).** Introduction to the study of physiological and metabolic activities of microorganisms and processes that affect them. Prerequisite: MCB 3023, MCB 3023L.

**MCB 4603 Microbial Ecology (3)**
**MCB 4603L Microbial Ecology (1).** Principles and applications of microbial interactions with the environment: physical, chemical, and biological. Prerequisite: MCB 3023, MCB 3023L.

**MCB 5405 Photosynthetic Bacteria (3).**
**MCB 5405L Biology of Photosynthetic Bacteria Lab (1).** Study of the physiology and ecology of photosynthetic bacteria, including "Blue-green algae" (cyanobacteria), purple and green bacteria, and Halobacteria.

**MCB 5505 Virology (3)**
**MCB 5505L Virology Lab (1).** Principles and methods of study of bacterial, plant, and animal viruses. Molecular aspects of viral development, virus pathogens, and carcinogens. Prerequisites: Biochemistry, Genetics, and Organic Chemistry.

**OCB 2003 Introductory Marine Biology (3)**
**OCB 2003L Introductory Marine Biology Lab (1).** A survey of marine biological environments and zones, including the relationship of the physical and chemical environment to the distribution of marine plants and animals.

**OCB 4674L Techniques in Biological Oceanography (1).** A laboratory course designed to acquaint the student with biological sampling techniques at sea. Shipboard experience will be required as part of the course. Prerequisites: Previous course in marine biology; registration in the Marine Science certificate program and permission of instructor.

**PCB 2510 Introductory Genetics (3).**
**PCB 2510L Introductory Genetics Lab (1).** Principles of Mendelian and Molecular genetics with selected examples of applications such as genetic engineering and twin studies.

**PCB 3043 Ecology (3)**
**PCB 3043L Ecology Lab (1).** The basic principles governing the interaction of organism and environment. Trophic structure and energetics, species diversity, evolution of populations, biogeochemical cycles.

**PCB 3203 Cell Physiology (3)**
**PCB 3203L Cell Physiology Lab (1).** Biochemical and biophysical principles of cell physiology: enzyme structure and function, energy transductions and conservation, electrical and chemical signals, cell cycle and cell division. Prerequisites: Eight semester hours each of General Biology, General Physics, and Organic Chemistry.

**PCB 3241 Physiology of Aging (3).** Introductory treatment of the physiology of organ systems with emphasis on the decline in organ function with aging and on the resultant limitations in physiological performance.

**PCB 3513 Genetics (3)**
**PCB 3513L Genetics Lab (1).** Mendelian inheritance and introduction to molecular genetics. Prerequisites: BSC 1011 and CHM 3210.

**PCB 3702 Intermediate Human Physiology (3)**
**PCB 3702L Intermediate Human Physiology Lab (1).** Functions of the human body and the physico-chemical mechanisms responsible for each organ's function. Prerequisite: General Biology.

**PCB 3703 Human Physiology I (3)**
**PCB 3703L Human Physiology I Lab (1).** Basic facts and concepts relating to the physiology of cells and nervous, muscular, and cardiovascular systems, with emphasis on regulatory mechanisms and abnormal physiology. Prerequisites: One year of Biology or Zoology; Chemistry, and Physics.

**PCB 3704 Human Physiology II (3)**
**PCB 3704L Human Physiology II Lab (1).** Physiology of respiratory, gastrointestinal, excretory, endocrine and reproductive systems. Continuation of PCB 3703. Prerequisites: One year of Biology or Zoology; Chemistry, and Physics.

**PCB 3711 Physiological Mechanisms (3).** Physiological processes studied from a biophysical and biochemical perspective. Integrative aspects of physiology are de-emphasized to accomplish a detailed, but introductory coverage of mechanisms.

**PCB 4024C Cell Biology (4).** A structural and molecular analysis of cell function. Prerequisite: PCB 3513.

**PCB 4233 Immunology (3)**
**PCB 4233L Immunology Lab (1).** Fundamentals of immunology including antibody structure, immunopathology, molecular recognition at cell surfaces and immunological aspects of cancer biology. Prerequisite: General Microbiology or permission of instructor.

**PCB 4254 Developmental Biology (3)**
**PCB 4254L Developmental Biology Lab (1).** Comprehensive survey of principles of development and critical analysis of methods used to study these problems. Prerequisites: PCB 3513 and PCB 3203 or BCH 3023.

**PCB 4303 Limnology (3)**
**PCB 4303L Limnology Lab (1).** Chemical and physical properties of standing and flowering freshwater systems; ecophysiology and interactions of the fresh water flora and fauna in relation to abiotic factors; oligotrophic to entrophic conditions.

**PCB 4524 Molecular Biology (3)**
**PCB 4524L Molecular Biology Lab (1).** Advanced nucleic acid and protein biochemistry: biosynthesis of macromolecules and molecular genetics. Prerequisite: Biochemistry or Genetics.

**PCB 4673 Evolution (3).** A study of the synthetic theory of evolution, its historic and experimental justification and the mechanisms of natural selection. Prerequisites: Genetics, Ecology, or permission of instructor.

**PCB 4723 Animal Physiology (3)**
**PCB 4723L Animal Physiology Lab (1).** Advanced study of physiological mechanisms employed by animals to maintain function of the organ systems and to interact with the environment. Prerequisites: Organic Chemistry and Cell Physiology or Biochemistry.

**PCB 4724 Comparative Physiology (3)**
**PCB 4724L Comparative Physiology Lab (1).** Regulation of the internal environment: osmotic gastrointestinal, metabolic, circulatory and respiratory physiology. Prerequisites: General Biology and Organic Chemistry.

**PCB 5195 Histochemistry/Microtechnique (3)**
**PCB 5195L Histochemistry/Microtechnique Lab (1).** Chemistry and use of fixatives and dyes; histochemistry emphasizes procedures used in research and pathology labs including techniques for enzymes, protein, carbohydrate, nucleic acids and lipids. Prerequisite: Biochemistry or Cell Physiology.

**PCB 5205 Cell Physiology and Biophysics (3).** Fundamental biophysical properties of membranes, transport of passive and active electrical phenomena. Biochemistry and biophysics of contractile mechanisms and information transfer . Prerequisites: Calculus and Physical Chemistry or permission of instructor.

**PCB 5259 Topics in Developmental Biology (3).** Molecular and cellular mechanisms in the development or plants and animals. Prerequisite: Senior status or permission of instructor.

**PCB 5344 Tropical Ecology Field Lab (2).** Field course in Costa Rica with fieldwork in two or more diverse habitats (rainforest, and dry forest). Emphasis on diversity and interactions between species. Visits to selected sites of deforestation, conservation and restoration.

**PCB 5358 Everglades Research and Resources Management (3).** Application of basic skills in ecology to contemporary issues in the Everglades area, with emphasis on the relation between research and management of wilderness, wildlife, vegetation, water and fire. Prerequisite: PCB 3043 Ecology or permission of instructor.

**PCB 5615 Molecular and Organismal Evolution (3).** The evolutionary relationships among nucleotides and proteins as well as the processes which yield these relationships. The possible molecular events leading to speciation. Prerequisites: Genetics and Biochemistry.

**PCB 5665 Human Genetics (3).** Principles and techniques in the analysis of the human race. Prerequisite: PCB 3513.

**PCB 5676 Evolution and Development of Sex (3).** The evolutionary explanations for the evolution of sexual reproduction and models of sexual differentiation. Prerequisites: Genetics and Evolution or permission of instructor.

**PCB 5677 Evolution and Development (3).** The models and evidence for the interaction of development and evolution, using both plant and animal systems. Prerequisite: Permission of instructor.

**PCB 5686C Population Biology (4).** Intrinsic properties of natural and theoretical populations and their dynamics and interactions, and responses to disturbance. Includes field problems and computer exercises. Prerequisite: A course in genetics, evolution, or permission of instructor.

**PCB 5687 Evolutionary Ecology (3).** Adaptations and interactions of plants and animals in natural and disturbed habitats. Prerequisite: PCB 3043 or equivalent.

**PCB 5835 Neurophysiology (3)**
**PCB 5835L Neurophysiology (1).** Comparative neurophysiology; physicochemical mechanisms of resting and action potentials; synaptic transmission; neural coding and integration; sensorymotor function and neurophysiological basis of behavior. Prerequisites: Biochemistry or Cell Physiology, Calculus.

**PCB 5934 Topics In Skeletal Muscle Physiology (4).** Advanced discussion of some aspects of the biophysics, biochemistry and physiology of skeletal muscle contraction. Topics may vary from year to year. Based on review articles and research papers. Prerequisite: APB 4240 or PCB 3703 and PCB 3203 or BCH 3023.

**ZOO 3203C Invertebrate Zoology (4).** Taxonomy, anatomy, development, physiology and ecology of major invertebrate groups, including terrestrial and aquatic phyla. Prerequisite: BSC 1010 or equivalent.

**ZOO 3303 Vertebrate Zoology (3)**
**ZOO 3303L Vertebrate Zoology Lab (1).** Systematics, anatomy, physiology, development ecology of vertebrate animals. One year of general biology with laboratory or general zoology with laboratory. Prerequisites: BSC 1010, BSC 1010L, BSC 1011, and BSC 1011L.

**ZOO 3603 Embryology (3)**
**ZOO 3603L Embryology Lab (1).** Animal morphogenesis. Laboratory must be taken with lecture. Prerequisites: One year of general biology with laboratory or general zoology and general botany with laboratory.

**ZOO 3731 Human Anatomy (4)**
**ZOO 3731L Human Anatomy Demonstration (1).** Survey of organ systems of the human body with major emphasis on the skeletal, muscular, and peripheral nervous system. Demonstrations of the prosected human cadaver. Prerequisites: A course in General Biology, General Chemistry, and General Physics.

**ZOO 3733 Human Gross Anatomy I (3)**
**ZOO 3733L Human Gross Anat I Lab (1).** Structure and function of various tissues, organs and organ systems of the human body. Dissection of human cadaver material to reveal the relationships of the various organ systems of the body. Prerequisites: BSC 1011, BSC 1011L, CHM 1046, CHM 1046L, PHY 3054, or equivalents.

**ZOO 3734 Human Gross Anatomy II (3)**
**ZOO 3734L Human Gross Anat II Lab (1).** Continuation of ZOO 3733. Prerequisites: BSC 1011, BSC 1011L, CHM 1046, CHM 1046L, or equivalents.

**ZOO 3753 Histology (3)**
bZOO 3753L Histology Lab (1). Microscopic anatomy of cells, tissues and organs. Prerequisites: General biology and organic chemistry.

**ZOO 3892C Biology of Captive Wildlife (3).** Behavior, nutrition, physiology, anatomy, pathology and diseases of captive wildlife. Taught at Metrozoo. Prerequisite: General Biology or permission of instructor.

**ZOO 4234 General Parasitology (2).** Modern concepts of biology, development, immunology and pathology of animal parasites.

**ZOO 4234L General Parasitology Lab (1).** Taxonomy and morphology of animal parasites. Prerequisite: BSC 1010 and BSC 1011.

**ZOO 4423C Herpetology (4).** Study of the biology of reptiles and amphibians with emphasis on the natural history and ecology of local species. Prerequisites: One year of biological sciences and ecology or permission of instructor.

**ZOO 4713C Comparative Vertebrate Anatomy (4).** The structural diversity and classification of vertebrates and the evolution of various organ systems. Dissection of a variety of vertebrate specimens to reveal the relationships of the various organ systems of the body. Prerequisite: One year of general biology with laboratory or general zoology with laboratory.

**ZOO 4743 Neuroscience (4).** Structure and function of the human nervous system. Dissection and demonstration of human nervous system and various neurophysiology labs. Prerequisites: One course in physiology and one course in human anatomy.

**ZOO 5256 Biology of Crustaceans (3). ZOO 5266L Biology of Crustaceans Laboratory (1).** Morphology, physiology, systematics and evolution in crustaceans.

**ZOO 5376 Animal Design and Movement (3).** Basic biomechanical and behavioral theories of how animals feed and move. Prerequisites: BSC 1010, BSC 1011, PHY 3053, and PHY 3054 or equivalent.

**ZOO 5732 Advanced Anatomy Demonstration (1-4).** Dissection and demonstration of the human body with the emphasis on structure and function. May be repeated to a maximum of 8 credits. Prerequisite: ZOO 3733L and ZOO 3734L.

**ZOO 5745 Advanced Neuroanatomy (3).** In-depth knowledge of the embryonic development, structure, and function of the human nervous system with a great deal of clinical consideration. Prerequisite: ZOO 4743 or permission of instructor.

# Chemistry

**Leonard S. Keller,** *Professor and Chairperson*
**Milagros Delgado,** *Assistant Professor*
**Kenneth G. Furton,** *Assistant Professor*
**Arthur W. Herriott,** *Professor and Acting Dean*
**Gary G. Hoffman,** *Assistant Professor*
**Jeffrey A. Joens,** *Associate Professor*
**John T. Landrum,** *Associate Professor and Graduate Coordinator*
**Ramon Lopez de la Vega,** *Associate Professor*
**Howard E. Moore,** *Professor*
**Zaida C. Morales-Martinez,** *Instructor and Coordinator of Chemistry Labs*
**John H. Parker,** *Professor*
**J. Martin Quirke,** *Professor*
**Donna L. Ticknor,** *Lecturer*
**Stephen Winkle,** *Associate Professor*

## Bachelor of Science

The chemistry program is accredited by the American Chemical Society and prepares the student for graduate study or a professional career as a chemist in industry, in government service, or in secondary school teaching. (Students interested in secondary teacher certification should contact the College of Education at 348-2721.)

### Lower Division Preparation

One year of general chemistry with laboratory; algebra and trigonometry, (advanced high school courses in algebra and trigonometry are acceptable).

To qualify for admission to the program, FIU undergraduates must have met all the lower division requirements including CLAST, completed 60 semester hours, and must be otherwise acceptable to the program.

### Lower or Upper Division Preparation

Differential and Integral Calculus I & II (MAC 3311 & 3312); Organic Chemistry I & II (CHM 3210, 3210L & 3211, 3211L); Physics with Calculus (PHY 3048, 3048L, 3049, 3049L).

**Upper Division Program:** (60 semester hours)

At least 36 credits in chemistry to include the following:

| | | |
|---|---|---|
| CHM 3120 | Quantitative Analysis | 3 |
| CHM 3120L | Quantitative Analysis Lab | 2 |
| CHM 3410 | Physical Chemistry I | 4 |
| CHM 3411 | Physical Chemistry II | 4 |
| CHM 3411L | Physical Chemistry Lab I | 1 |
| CHM 3412L | Physical Chemistry Lab II | 2 |
| CHM 4130 | Modern Analytical Chemistry | 3 |
| CHM 4130L | Modern Analytical Chemistry Lab | 2 |
| CHM 4220 | Advanced Organic Chemistry | 3 |
| CHM 4320L | Research Techniques in Organic Chemistry | 2 |
| CHM 4610 | Advanced Inorganic Chemistry | 3 |
| CHM 4910L | Undergraduate Research in Chemistry | 3 |
| CHM 4930 | Senior Seminar | 1 |
| One additional senior-level (4000) Chemistry course | | 3 |

At least three additional credits to be chosen from the following list:

| | | |
|---|---|---|
| MAP 3302 | Differential Equations | 3 |
| CGS 3420 | Fortran for Engineers | 3 |
| MAC 3313 | Multivariable Calculus | 3 |
| Electives | | 21 |

## Bachelor of Arts

This program is designed for students preparing for careers in medicine, dentistry, environmental studies, veterinary medicine, patent law, secondary science education, or criminalistics chemistry. Students should complement the basic curriculum with suitable electives chosen in consultation with an advisor. (Students interested in secondary teacher certification should contact the College of Education at 348-2721.)

### Lower Division Preparation

One year of general chemistry with laboratory; one year of general biology with laboratory; algebra with trigonometry (advanced high school courses in algebra and trigonometry are acceptable).

To qualify for admission to the program, FIU undergraduates must have met all the lower division requirements including CLAST, completed 60 semester hours, and must be otherwise acceptable to the program.

### Lower or Upper Division Preparation

Differential and Integral Calculus I & II (MAC 3311 & 3312); Organic Chemistry I & II (CHM 3210, 3210L & 3211,3210L); Physics (either PHY 3048, 3048L and 3049, 3049L or PHY 3053, 3048L and 3054, 3049L).

**Upper Division Program:** (60 semester hours)

At least 16 credits in chemistry to include the following:

| | | |
|---|---|---|
| CHM 3120 | Quantitative Analysis | 3 |
| CHM 3120L | Quantitative Analysis Lab | 2 |
| CHM 3400 | Fundamentals of Physical Chemistry | 3 |

| | | |
|---|---|---|
| CHM 3400L | Fundamentals of Physical Chemistry Lab | 1 |
| CHM 4220 | Advanced Organic Chemistry | 3 |
| CHM 4230L | Structure Determination Lab | 1 |
| And at least one additional senior level (4000) course in chemistry | | 3 |
| Electives | | 44 |

## Minor in Chemistry

The Minor requires at least 23 credits in chemistry to include:

| | |
|---|---|
| General Chemistry I & II (CHM 1045, 1045L, and 1046, 1046L) | 9 |
| Quantitative Analysis (CHM 3120, 3120L) | 5 |
| Organic Chemistry I & II (CHM 3210, 3210L and 3211, 3211L) | 9 |

At least half of the credits to be counted towards the minor must be taken at the University.

## Criminalistics-Chemistry Program

The Criminalistics-chemistry Core Requirements are the same as the requirements for the BA degree in chemistry plus Modern Analytical Chemistry (CHM 4130, 4130L). (Degree granted by Department of Chemistry.)

### Internship

A 3-6 credit internship in the laboratory of a participating criminal justice agency.

Criminal Justice Coursework: The student should take nine credits of criminal justice courses in consultation with an advisor in the Department of Criminal Justice, 940-5850.

### Electives

Coursework in the behavioral and political sciences, and upper division coursework in the biological sciences is recommended to total 60 semester hours.

## Pre-Medical, Dentistry, Veterinary, Optometry Curricula

Students who have satisfied the requirements for either the BA or the BS degree in chemistry will also have satisfied the course requirements for admission to professional schools in the above areas. Additional coursework in chemistry and biology relevant to the career objectives of the student may also be taken as electives. Interested students should consult a Chemistry Department faculty advisor.

A seven year FIU/SECOM program in osteopathic medicine is also offered; students must be admitted to FIU and to SECOM (Southeastern College of Osteopathic Medicine).

## Cooperative Education

Students seeking the baccalaureate degree in chemistry may also take part in the Cooperative Education Program conducted in conjunction with the Department of Cooperative Education in the Division of Student Affairs. The student spends one or two semesters fully employed in an industrial or governmental chemistry laboratory. For further information consult the Department of Chemistry or the Department of Cooperative Education at 348-2423.

## Department Policy

The Department of Chemistry does not award credit for courses by examination; it does, however, award credit for AP Chemistry with a score of 3 or higher and with evidence of a suitable laboratory experience. The department does not award credit for life experience.

## Course Descriptions

*Note:* Laboratories may not be taken prior to the corresponding course. Laboratories must be taken concurrently where noted. Students must register for the laboratory separately.

### Definition of Prefixes

CHM-Chemistry; CHS-Chemistry-Specialized; ISC-Interdisciplinary Natural Sciences; OCC-Oceanography-Chemical.

**CHM 1032 Chemistry and Society(3)**
**CHM 1032L Chemistry and Society Lab (1).** A course for non-science majors which introduces students to basic concepts in chemistry and applies those concepts to contemporary issues such as air/water pollution, energy and food production, drugs, nutrition, and toxic chemicals. Prerequisite: One year of high school or college algebra.

**CHM 1033 Survey of Chemistry (4).**
**CHM 1033L Survey of Chemistry Lab (1)** General and organic chemistry for non-science majors only. Atoms and molecules, states of matter, equilibrium, kinetics, acids and bases and introduction to organic chemistry. Laboratory must be taken concurrently. Does not fulfill requirements for chemistry, biology or pre-med majors. Prerequisites: One year of high school or college algebra.

**CHM 1045 General Chemistry I (4)**
**CHM 1045L General Chemistry Lab I (1).** Fundamental principles of general chemistry: states of matter, atomic structure, stoichiometry, chemical bonding, acid-base reactions, gas laws. Concurrent registration in both lecture and laboratory is required. Prerequisite: Second year high school algebra or college algebra.

**CHM 1046 General Chemistry II (3)**
**CHM 1046L General Chemistry Lab II (1).** Continuation of General Chemistry I (CHM 1045). Fundamental principles of chemistry: thermodynamics, solutions, kinetics, equilibrium and electrochemistry. Concurrent registration in both lecture and laboratory is required. Prerequisites: CHM 1045, CHM 1045L.

**CHM 3120 Quantitative Analysis (3)**
**CHM 3120L Quantitative Analysis Lab (2).** Fundamentals of classical quantitative analysis. Topics include theory of precipitation, acid-base and oxidation-reduction reactions, as well as an introduction to spectrophotometric methods of analysis, ion-exchange techniques and complex formation. Laboratory must be taken concurrently with the course. Prerequisites: CHM 1046, CHM 1046L.

**CHM 3200 Survey of Organic Chemistry (3)**
**CHM 3200L Survey of Organic Chemistry Lab (1).** A basic one-semester survey course in organic chemistry for non-majors presenting a broad background in the reactions and structures of organic molecules. Does not fulfill requirements for chemistry, biology, or pre-med majors. Laboratory must be taken concurrently with the course. Prerequisites: CHM 1032, CHM 1032L, CHM 1033, CHM 1033L, or CHM 1046, CHM 1046L.

**CHM 3210 Organic Chemistry I (4)**
**CHM 3210L Organic Chemistry Lab I (1).** An introduction to chemical bonding and atomic structure theory as it pertains to the chemistry of carbon compounds. Correlation between structure and reactivity of organic molecules followed by a systematic look at the various reaction types using reaction mechanisms as a tool for study. Concurrent registration in both lecture and laboratory is required. Prerequisites: CHM 1046, CHM 1046L.

**CHM 3211 Organic Chemistry II (3)**
**CHM 3211L Organic Chemistry Lab II (1).** Continuation of CHM 3210, 3210L. Concurrent registration in lecture and laboratory is required. Prerequisites: CHM 3210, 3210L.

**CHM 3400 Fundamentals of Physical Chemistry (3).**
**CHM 3400L Fundamentals of Physical Chemistry Lab (1).** Principles of physical chemistry. Topics include thermodynamics, equilibria, electrochemistry, and reaction kinetics. Laboratory

must be taken concurrently with the course. Prerequisites: MAC 3411, 3412; PHY 3048, 3048L PHY 3049, 3049L, or PHY 3053, 3048L, and 3054, 3049L, CHM 3120, 3120L.

**CHM 3410 Physical Chemistry I (4).** Introduction to quantum mechanics. The Schrodinger equation and its application to rotational, vibrational, and electronic spectroscopy, atomic and molecular structure, and bonding. Prerequisites: MAC 3411, 3412; PHY 3048, 3048L, 3049, 3049L, and CHM 3120, 3120L.

**CHM 3411 Physical Chemistry II (4) CHM 3411L Physical Chemistry Lab I (1).** A continuation of CHM 3410. Principles of thermodynamics, gas laws, kinetic theory of gases, chemical equilibrium, electrochemistry, and kinetics. Laboratory to be taken concurrently with the course. Prerequisite: CHM 3410 or permission of instructor.

**CHM 3412L Physical Chemistry Lab II (2).** Laboratory experiments illustrating topics and concepts covered in CHM 3411. Must be taken after successful completion of CHM 3411 and 3411L. Prerequisites: CHM 3411 and 3411L.

**CHM 3949, CHM 4949 Cooperative Education in Chemistry (1-3).** One semester of fulltime supervised work in an outside laboratory. Limited to students admitted to the University Coop Program. A written report and supervisor evaluation will be required of each student.

**CHM 4090L Introduction to Scientific Glassblowing (1).** Basic glassblowing operations with glass tubing and rod are taught. Emphasis is on making and repair of scientific glassware. No prerequisites.

**CHM 4130 Modern Analytical Chemistry (3)**
**CHM 4130L Modern Analytical Chemistry Lab (2).** Instrumental methods of chemical analysis, including electroanalytical methods, gas and liquid chromatography, mass spectrometry, x-ray fluorescence, and spectrophotometric methods. Laboratory must be taken concurrently with the lecture. Prerequisites: CHM 3120, 3120L, CHM 3211, 3211L, CHM 3410, PHY 3048, 3048L, PHY 3049, 3049L, or permission of instructor.

**CHM 4220 Advanced Organic Chemistry (3).** An intensive examination of the major areas of contemporary organic chemistry. Reactive intermediates, pericyclic reactions, molecular rearrangements, and modern synthetic methods are among the topics covered. Prerequisites: CHM 3211, 3211L.

**CHM 4230L Structure Determination Lab (1).** The qualitative analysis of organic compounds using modern spectroscopic, chromatographic and chemical methods. Restricted to B.A. Chemistry majors. Prerequisites: CHM 3211, and 3211L.

**CHM 4300 Bio-Organic Chemistry (3).** Chemistry of naturally-occurring organic compounds of biological importance. The relationship between organic chemistry and the chemical reactions which constitute the living organism. Prerequisite: CHM 3211, and 3211L.

**CHM 4310 Special Topics in Organic Chemistry,(VAR).** An intensive examination of one or more areas selected by instructor and students. Prerequisites: CHM 3211 and permission of instructor.

**CHM 4320L Research Techniques in Organic Chemistry (2).** Practical instruction in the more advanced manipulations and procedures of the modern chemistry laboratory. Restricted to B.S. chemistry majors. Prerequisites: CHM 3120, 3211, 3211L, 3410, and 3411L.

**CHM 4610 Advanced Inorganic Chemistry (3).** Atomic structure, periodicity, bonding and structure of inorganic compounds, solution chemistry, ligand field theory, organometallic chemistry, and specific chemistry of the elements. Prerequisites: CHM 3120, 3211, and 3411.

**CHM 4610L Advanced Inorganic Chemistry Lab (1).** Synthesis, purification, and study of coordination and organometallic compounds. Prerequisite: CHM 3411. Corequisite: CHM 4610.

**CHM 4910L Undergraduate Research in Chemistry (VAR).** The student works directly with a professor on a research project. Credit is assigned based on 4 hr/wk laboratory/library work per credit hour. May be repeated. A written report is required.

**CHM 4930 Senior Seminar (1).** Each student will make an oral presentation to faculty and other students enrolled in the seminar course. The subject of the seminar may be either a report of results of an independent study project or a survey of the recent literature on an assigned topic.

**CHM 5150 Graduate Analytical Methods (3).** Analysis of analytical data, electrochemistry, spectroanalytical techniques, chromatography, survey of new analytical methods. Prerequisite: Graduate standing or permission of instructor.

**CHM 5156 Advanced Chromatography (3).** Intensive examination of the contemporary practice of chromatography including available chromatographic techniques, their selection and application. Prerequisite: CHM 4130 or permission of instructor.

**CHM 5181 Special Topics in Analytical Chemistry (VAR).** An intensive examination of one or more areas selected by instructor and students. Core course Prerequisite: CHM 4130 or permission of instructor.

**CHM 5225 Graduate Organic Chemistry (3).** Advanced topics in organic chemistry. Structure of organic molecules, reaction mechanisms, organic synthesis, and natural product chemistry. Prerequisite: Graduate standing or permission of instructor.

**CHM 5250 Organic Synthesis (3).** Use of classical and modern reactions in the design and construction of complex organic molecules including natural products. Some topics covered will be construction reactions, refunctionalization, stereochemistry and conformational analysis. Prerequisite: CHM 4220 or permission of instructor.

**CHM 5260 Physical Organic Chemistry (3).** A series of topics will be discussed including molecular orbital theory as it pertains to organic molecules, kinetic and thermodynamic approaches to the study of reaction mechanisms, quantitative approaches to conformational analysis, etc. Prerequisite: CHM 4220 and physical chemistry or permission of instructor.

**CHM 5280 Natural Products Chemistry and Biosynthesis (3).** Studies of the chemical origins (biosynthesis), properties, and synthesis of the various classes of naturally occurring compounds: terpenes, steroids, alkaloids, acetogenins. Prerequisite: CHM 4220 or permission of instructor.

**CHM 5380 Special Topics in Organic Chemistry (VAR).** An intensive examination of one or more areas selected by instructor and students. Core course. Prerequisite: CHM 4220 and physical chemistry or permission of instructor.

**CHM 5425 Graduate Physical Chemistry (4).** Prequantum physics, the Schrodinger equation and its solutions, atoms and molecules, rotational, vibrational, and electronic spectroscopy. Prerequisite: Graduate standing or permission of instructor.

**CHM 5440 Kinetics and Catalysis (3).** Theory of elementary reactions, activated complex theory, mechanisms of complex reactions. Prerequisites: CHM 3411, MAP 3302.

**CHM 5490 Spectroscopy and Molecular Structure (3).** Introduction to atomic and molecular quantum states, selection rules, and fundamental principles of spectroscopy. Introduction to group theory and to the theory of UV/visible, infrared, Raman, microwave, nmr, photoelectron, and mass spectroscopies, and the applications of these methods to the determination of fundamental physical properties and the structure of organic and inorganic molecules. Prerequisite: Physical Chemistry.

**CHM 5490L Spectroscopy and Molecular Structure Lab (1).** The theory of spectroscopy and the use of modern instrumentation to investigate molecular structure. Prerequisites: CHM 3211, 3211L. Corequisite: PHY 4604 or CHM 5490.

**CHM 5506 Physical Biochemistry (3).** Physical properties of biomolecules, molecular conformation; thermodynamic, kinetic, and spectroscopic properties of biomolecules. Prerequisites: CHM 3211, MAC 3311, and physical chemistry or permission of instructor.

**CHM 5517 Solid State (3).** Crystalline form of solids, lattice dynamics, metals, insulators, semiconductors, and dielectric materials. Prerequisite: CHM 5490 or PHY 4604.

**CHM 5581 Special Topics in Physical Chemistry (VAR).** An intensive examination of one or more areas selected by instructor and students. Prerequisite: CHM 3411 or permission of instructor.

**CHM 5650 Physical Inorganic Chemistry (3).** Introduction to use of physical methods to determine the structure of inorganic compounds. Prerequisite: CHM 4610 or permission of instructor.

**CHM 5681 Special Topics in Inorganic Chemistry (VAR).** An intensive examination of one or more areas selected by instructor and students. Prerequisite: CHM 4610 or permission of instructor.

**CHM 5931 Special Topics (3).** A course covering selected special topics in chemistry.

**CHS 4100 Radiochemistry (2)**
**CHS 4100L Radiochemical Techniques Lab (2).** Production, isolation, methods of detection, counting statistics and estimation of radioisotopes. Applications to chemical, physical and biological problems. Laboratory must be taken concurrently with the course. Prerequisites: CHM 1045, 1046, 3120, 3120L; MAC 3411, 3412.

**CHS 4591 Internship in Criminalistics Chemistry (3).** Internship in a forensic-type laboratory, contributing in a specific manner on an assigned problem. Twenty hrs/wk. Written report required. Open only to students in the Criminalistics Chemistry Program. Prerequisite: Senior standing.

**CHS 5531 Forensic Analysis (3).** An introduction to established chemical analysis techniques used in forensic science and new techniques under development. Prerequisite: CHM 3120, CHM 3120L, CHM 3211, CHM 3211L or permission of instructor.

**CHS 5531L Forensic Analysis Lab (1).** Laboratory to accompany Forensic Analysis CHS 5531. Prerequisite: CHM 3120, CHM 3120L, CHM 3211, CHM 3211L or permission of instructor.

**ISC 4041 Scientific Literature (1).** This course presents a perspective on the scientific literature and scientific documentation. Problems in using and searching the scientific literature will be specifically designed to meet the needs of various disciplines, e.g. chemistry, environmental science, physics, biology. Prerequisites: 16 semester hours of science.

**OCC 3002 Chemical Oceanography (3)**
**OCC 3002L Chemical Oceanography Lab (1).** Chemical composition and properties of seawater including major and minor elements, dissolved gases, buffering systems. Lecture and lab should be taken concurrently. Prerequisites: one year of general chemistry with lab; quantitative analysis with lab.

## School of Computer Science

**Jainendra K. Navlakha,** *Professor and Director*
**Farah Arefi,** *Assistant Professor*
**Toby S. Berk,** *Professor and Associate Director*
**David S. Barton,** *Professor*
**John C. Comfort,** *Professor*
**Raimund Ege,** *Assistant Professor*
**Carol D. Henley,** *Instructor*
**William T. Kraynek,** *Associate Professor*
**Wesley F. Mackey,** *Lecturer*
**Masoud Milani,** *Assistant Professor*
**Ana Pasztor,** *Associate Professor*
**Alexander Pelin,** *Associate Professor*
**Norman Pestaina,** *Instructor*
**N. Prabhakaran,** *Assistant Professor*
**Naphtali Rishe,** *Associate Professor*
**Orlando Sauleda,** *Instructor*
**Doron Tal,** *Assistant Professor*
**Mark Weiss,** *Assistant Professor*

The School of Computer Science offers both undergraduate and graduate degree programs. The major program and a minor program, are described below.

### Bachelor of Science

### Lower Division Preparation

To qualify for admission to the program, FIU undergraduates must have met all the lower division requirements including CLAST, completed 60 semester hours, and must be otherwise acceptable into the program.

As part of the 60 semester hours of lower division coursework necessary to enter this upper division major, note the following recommendations or course requirements, or both.

### Required Courses

**Recommended for First Year**

| | | |
|---|---|---|
| MAC 2132 | Pre-Calculus (if necessary) | 3 |
| MAC 3311 | Calculus I | 3 |
| COP 2210 | Programming in Pascal | 3 |

**Recommended for Second Year**

| | | |
|---|---|---|
| MAC 3312 | Calculus II | 5 |
| MAD 3104 | Discrete Mathematics | 3 |
| COP 3400 | Assembly Language Programming | 3 |

**Recommended for Third and Fourth Years**

| | | |
|---|---|---|
| ENC 3210 | Technical Writing | 3 |
| COP 3212 | Intermediate Programming | 3 |
| MAD 3512 | Introduction to Theory of Algorithms | 3 |
| COP 3530 | Data Structures | 3 |
| COP 3223 | Advanced Programming | 3 |
| CIS 4610 | Introduction to Software Engineering | 3 |
| CDA 4101 | Structured Computer Organization | 3 |
| COP 4610 | Operating Systems Principles | 3 |
| STA 3033 | Introduction to Probability and Statistics for CS | 3 |
| | or | |
| STA 3321-2 | Mathematical Statistics I and II | 3-3 |

From the courses listed below, the student must select three electives, with at least one course from List 1 and one course from List 2.

**List 1**

| | | |
|---|---|---|
| MAD 3305 | Graph Theory | 3 |

| | | |
|---|---|---|
| MAD 3401 | Numerical Analysis | 3 |
| MHF 4302 | Mathematical Logic | 3 |
| COT 5420 | Theory of Computation I | 3 |
| MAD 4203 | Introduction to Combinatorics | 3 |

**List 2**

| | | |
|---|---|---|
| CDA 4400 | Computer Hardware Analysis | 3 |
| CDA 4500 | Data Communications | 3 |
| CAP 3710 | Introduction to Computer Graphics | 3 |
| COP 3120 | Data Processing and COBOL | 3 |
| COP 4225 | Systems Programming in Unix | 3 |
| COP 4555 | Survey of Programming Languages | 3 |
| COP 4540 | Database Management | 3 |
| COP 5621 | Compiler Construction | 3 |

**Electives**

The balance of the 60 semester hours required for graduation may be chosen from any courses in the University approved by the student's advisor. A Computer Science major may not take a computer related course in another department for elective credit, unless specifically approved in advance in writing by the student's advisor.

Remarks: The following courses are not acceptable for credit toward graduation, unless a student has passed the course before declaring a Computer Science major: CGS 2060, CGS 3300, COP 2172, MAC 3233, STA 3013, STA 3122-23, STA 3132, QMB 3150, ESI 3161.

## Minor in Computer Science

**Required Courses**

| | | |
|---|---|---|
| COP 2210 | Programming in PASCAL | 3 |
| COP 3400 | Assembly Language Programming | 3 |
| COP 3212 | Intermediate Programming | 3 |

Plus two from the following list: COP 3120, CGS 3403, COP 3223, COP 3530, COP 4555, CDA 4101, CDA 4400, CDA 4500, CAP 3700, CGS 3570, and MAD 3401. Normally the students from Engineering would choose COP 3223, and either COP 3530 or CDA 4101 and students from the School of Business would choose CGS 3570 and either COP 3120 or CGS 3403. If one of the other options are selected, then the student should verify that he or she has the additional prerequisites necessary for the chosen course. At least nine of the 15 credits must be taken at FIU.

*Remarks:* No mathematical sciences courses (Computer Science, Mathematics, or Statistics) can be applied to more than one minor, nor can courses used to satisfy major requirements be used towards minor requirements. In the case where a mathematical science course is required for a major in one area and a minor in another, the student should see his or her advisor for an appropriate substitution for the requirement of the minor.

## Course Description

**Definition of Prefixes**

CAP-Computer Applications; CDA-Computer Design/Architecture; CIS-Computer Information Systems; CGS-Computer General Studies; COC-Computer Concepts; COP-Computer Programming; COT-Computing Theory.

**CAP 3710 Introduction to Computer Graphics (3).** A first course in computer graphics. Course includes several programming assignments using available graphics hardware. There is considerable emphasis on the use of an available graphics software package. Prerequisites: COP 3212 or CGS 3420, and MAC 3312.

**CAP 5602 Introduction to Artificial Intelligence (3).** Presents the basic concepts of AI and their applications to game playing, problem solving, automated reasoning, natural language processing and expert systems. Prerequisite: COP 3530.

**CAP 5680 Expert Systems (3).** Introduction to expert systems, knowledge representation techniques and construction of expert systems. A project such as the implementation of an expert system in a high level AI-language is required. Prerequisite: COP 3530 or permission of instructor.

**CAP 5701 Advanced Computer Graphics (3).** Advanced topics in computer graphics: system architecture, interactive techniques, image synthesis, current research areas. Prerequisites: COP 3530 and CAP 3710 or equivalent, or by permission.

**CDA 4101 Structured Computer Organization (3).** This course investigates the analysis of the levels of organization of computer systems, including the conventional, microprogramming and operating systems levels. A number of major computer systems are analyzed. Prerequisites: MAD 3104, COP 3400 and COP 3212.

**CDA 4400 Computer Hardware Analysis (3).** The study of hardware functions of a basic computer. Topics include logic elements, arithmetic logic units, control units, memory devices, organization and I/O devices. Prerequisites: CDA 4101.

**CDA 4500 Data Communications (3).** Study of communications-based systems, common carrier facilities, tariffs, and related equipment. Analysis and design of communications networks utilizing various techniques. Uses of communications for data collection, remote computing, message switching. Prerequisite: CDA 4101.

**CDA 5312 Micro Processing for Software Designers (3).** Design of application software for OEM products. Topics include: 16-bit microprocessor architecture and assembly language, HLLs for design of microprocessor software, software for multiprocessing and multiprocessor systems. Prerequisite: Permission of instructor.

**CGS 1500 Word Processing with Wordperfect (1).** This course is to teach how to use Wordperfect effectively. The student will be expected to become competent Wordperfect user. Not acceptable for credit to Computer Science majors.

**CGS 1510 Electronic Spreadsheets (1).** The fundamentals of electronic spreadsheets using a modern software package on a microcomputer. Not acceptable for credit to Computer Science majors.

**CGS 1540 Microcomputer Databases (1).** The fundamentals of microcomputer Database management system using a modern software package on a microcomputer. Not acceptable for credit to Computer Science majors.

**CGS 1580 Desktop Publishing (1).** The fundamentals of desktop Publishing and Presentation graphics using a modern software package on a microcomputer. Not acceptable for credit to Computer Science majors.

**CGS 2060 Introduction to Microcomputers (3).** A hands-on study of microcomputer software packages for applications such as operating system, word processing, spreadsheets, and database management. For students without a technical background. Not acceptable for credit to Computer Science majors.

**CGS 3403 COBOL for Non-Computer Science Majors (3).** Introduction to COBOL and historical background. Flowcharting and program design. This course is not for computer science majors.

**CGS 3420 Programming for Engineers (3).** A first course in programming

that describes the syntax and semantics of the FORTRAN 77 programming language. The development of algorithms will be discussed together with fundamentals of program testing and debugging. Emphasizes those aspects of the language required by students of engineering and natural sciences. Not acceptable for credit for Computer Science majors.

**CGS 3570 Advanced Microcomputer Applications (3).** Microcomputer systems and technology. Topics include popular hardware, operating systems, application software, system development and maintenance.

**CIS 3900 Independent Study (VAR).** Individual conferences, assigned readings, and reports on independent investigations.

**CIS 3930 Special Topics (VAR).** A course designed to give groups of students an opportunity to pursue special studies not otherwise offered.

**CIS 4610 Introduction to Software Engineering (3).** Basic tools and techniques for specifying, designing, implementing, verifying, and testing large programs. Topics include: requirements, diagrams, data flow analysis, top down design, implementation, and testing; module organization and development techniques, program correctness, the Software Life Cycle, and an introduction to software management techniques. Prerequisites: COP 3223 and COP 3530.

**CIS 4905 Independent Study (VAR).** Individual conferences, assigned readings, and reports on independent investigations.

**CIS 4930 Special Topics (VAR).** A course designed to give groups of students an opportunity to pursue special studies not otherwise offered.

**CIS 5611 Software Engineering (3).** This course deals with the design of large scale computer programs. Included are topics dealing with planning design, implementation, validation, metrics, and the management of such software projects. Prerequisite: CIS 4610.

**CIS 5900 Independent Study (1-10).** Individual conferences, assigned readings, and reports on independent investigations.

**CIS 5910 Project Research (1-6).** Advanced undergraduate or master's level research for particular projects. Repeatable. Prerequisite: Permission of Department.

**CIS 5931 Special Topics (VAR).** A course designed to give groups of students an opportunity to pursue special studies not otherwise offered.

**COP 2172 Programming in BASIC (3).** Introduction to the BASIC computer language with emphasis on business data processing applications. Not acceptable for credit to computer science majors.

**COP 2210 Programming in PASCAL (3).** A course in the fundamentals of digital computer programming. The concept of an algorithm; pseudo-code; programming; testing and debugging using a well-structured language. The syntax and semantics of PASCAL.

**COP 3120 Data Processing and COBOL (3).** A course in programming, oriented toward data processing applications. Various techniques for organizing and processing files; sequential file random-access, indexed and inverted files. File sorting and maintenance. Program documentation. Instruction for COBOL programming language. Applications of computers and data processing in business. Prerequisite: COP 3212.

**COP 3212 Intermediate Programming (3).** A study of the ADA Programming Language including the subset of ADA that is like Pascal, file handling, packages and generic packages. An introduction to data structures is included. Prerequisite: COP 2210 or equivalent.

**COP 3223 Advanced Programming (3).** The course covers advanced programming concepts, including object-oriented programming, using the C and C++ programming languages. Prerequisites: COP 3212 and COP 3400.

**COP 3400 Assembly Language Programming (3).** Principles and techniques of digital computers with emphasis on machine language and assembly language programming. Internal representation of numeric and non-numeric information; registers, indexing and computer structure; arithmetic, logical and input-output instructions; fixed and floating arithmetic. Prerequisites: COP 2210 or CGS 3420.

**COP 3530 Data Structures (3).** Basic concepts of data organization, running time of a program, abstract types, data structures including linked lists, n-ary trees, sets and graphs, internal sorting. Prerequisites: MAD 3104 and COP 3212.

**COP 3949 Cooperative Education in Computer Science (1-3).** One semester of full-time work, or equivalent, in an outside organization, limited to students admitted to the CO-OP program. A written report and supervisor evaluation is required of each student. Prerequisites: Calculus II and COP 3212.

**COP 4225 Systems Programming in Unix (3).** Unix overview: files and directories, shell programming. Unix tools: awk, grep, make and others. Unix internals: file system, process structure. Device drivers. Networks. Significant programming is required. Corequisite: COP 4610. Prerequisite: COP 3223.

**COP 4540 Database Management (3).** Logical aspects of databases. Topics include: Semantic Binary, Relational Network and Hierarchical Models; Database design; Fourth-generational languages; SQL; Physical database organization; object-oriented databases. Corequisite: COP 3530.

**COP 4555 Survey of Programming Languages (3).** A comparative study of several programming languages. Emphasis is given to design, evaluation and implementation. Programs are written in a few of the languages. Prerequisite: COP 3212.

**COP 4610 Operating Systems Principles (3).** A study of the basic principles of modern multiprogramming and time-sharing systems. Interrupts and data channels, multiprocessor system memory management, virtual memory, segmentation, process communication, deadlock, and interlock handling. Prerequisites: CDA 4101, COP 3223, and COP 3530.

**COP 4949 Cooperative Education in Computer Science (1-3).** One semester of full-time work, or equivalent, in an outside organization, limited to students admitted to the CO-OP program. A written report and supervisor evaluation is required of each student. Prerequisites: MAC 3312, STA 3033 and COP 3212.

**COP 5621 Compiler Construction (3).** Basic techniques of compilation; self-compilers; syntax encoding and recognition; code generation and optimization. Prerequisites: MAD 3512 and CIS 4610.

**COT 3420 Logic for Computer Science (3).** An introduction to the logical concepts and computational aspects of propositional and predicate logic, as well as to concepts and techniques underlying logic programming, in particular, the computer language Prolog. Prerequisites: COP 2210 or equivalent, and MAD 3104.

**COT 5420 Theory of Computation I (3).** Abstract models of computation; halting problem; decidability and undecidability; recursive function theory. Prerequisite: MAD 3512.

**COT 5936 Topics in Algorithms (3).** Advanced data structures, pattern matching algorithms, file compression, cryptography, computational geometry, numerical algorithms, combinatorial optimization algorithms and additional topics. Prerequisite: COP 3530.

## Economics

**Raul Moncarz,** *Professor and Chairperson*
**Hassan Arvin-Rad,** *Assistant Professor*
**Manuel J. Carvajal,** *Professor*
**Robert Cruz,** *Assistant Professor*
**Irma de Alonso,** *Associate Professor*
**Maria Dolores Espino,** *Assistant Professor*
**Timothy Goodspeed,** *Assistant Professor*
**Antonio Jorge,** *Professor of Political Economy*
**Ali Cem Karayalcin,** *Assistant Professor*
**Bruce Kelley,** *Assistant Professor*
**Panagis Liossatos,** *Professor*
**J. Kenneth Lipner,** *Assistant Professor*
**Jorge Salazar-Carrillo,** *Professor and Director, Center of Economic Research and Education*
**Carlos Sevilla,** *Assistant Professor*
**Jong-Shin Wei,** *Assistant Professor*
**Mira Wilkins,** *Professor*
**Maria Willumsen,** *Assistant Professor*

The major in economics provides the student with an understanding of economic problems and institutions, and analytical tools to apply this knowledge to contemporary problems. The program is designed for the student desiring a career in business, government, international agencies, or multinational corporations; and for those planning graduate study in economics, business, law, public administration, urban studies, or international relations.

### Bachelor of Arts

### Lower Division Preparation

#### Required Courses

Three semester hours of calculus, three semester hours of statistics, Principles of Macroeconomics (ECO 2013 or ECO 3011, or equivalent) and Principles of Microeconomics (ECO 2023 or ECO 3021, or equivalent).

To qualify for admission to the program, FIU undergraduates must have met all the lower division requirements including CLAST, completed 60 semester hours, and must be otherwise acceptable into the program.

**Upper Division Program:** (60 semester hours)

Required Courses

| | | |
|---|---|---|
| ECO 3101 | Theory of Price | 3 |
| ECO 3203 | Aggregate Economic Analysis | 3 |
| ECO 3930 | Special Topics in Theory[1] | 3 |
| ECO 3303 | Development of Economic Thought | 3 |
| ECO 4410 | Measurement and Analysis of Econ Activity | 3 |
| ECO 4421 | Introduction to Econometrics | 3 |
| Additional Economics Courses[2] | | 15 |
| Electives | | 27 |

[1]This requirement can also be met by taking one of the following topics in theory courses: ECO 3931, ECO 4932, ECO 4933.

[2]ECO 3431 can not be included in this grouping of additional courses.

### Minor in Economics

#### Required Courses

| | | |
|---|---|---|
| ECO 3101 | Theory of Price | 3 |
| ECO 3203 | Aggregate Economic Analysis | 3 |
| Additional Economics Courses[1] | | 9 |

[1]ECO 2013, ECO 2023, ECO 3011, ECO 3021, ECO 3040, and ECO 3431 cannot be included in this grouping.

### Course Descriptions

#### Definition of Prefixes

ECO-Economics; ECP-Economic Problems and Policy; ECS-Economic Systems and Development.

**ECO 2013 Macro Principles (3).** Introduction to economics from the aggregate point of view. National income accounting, monetary and fiscal policy and their interaction in the economy.

**ECO 2023 Micro Principles (3).** Introduction to economics from the individual point of view. Traditional supply and demand determination and analysis.

**ECO 3011 Economics, Man and Society-Macro (3).** Relationship of economics to aggregate income. Identification of economic and non-economic objectives and problems. Analysis of economic behavior of individuals, business firms, public agencies, and interest groups. Public issue interpretation in the light of economic theory.

**ECO 3021 Economics, Man and Society-Micro (3).** Relationship of economics to individual action. Identification of economic and non-economic objectives and problems. Analysis of economic behavior of individuals, business firms, public agencies, and interest groups.

**ECO 3040 Consumer Economics (3).** Consumer behavior; advertising and other influences affecting demand. Patterns of consumer expenditure; effects of public policy on family incomes and consumption patterns. The consumer protection movement.

**ECO 3101 Theory of Price (3).** Operation of individual markets; market structure; theory of the firm; theory of production; demand theory; general equilibrium and welfare economics. Recommended preparation: ECO 3011 and ECO 3021.

**ECO 3203 Aggregate Economic Analysis (3).** Analysis of the measurement, determination, and control of aggregate economic activity; the monetary system in relation to income and employment; short-term income fluctuations; long-term growth. Recommended preparation: ECO 3011 and ECO 3021.

**ECO 3223 Money and Banking (3).** Elements of monetary theory; relationships between money, prices, production, and employment; factors determining money supply; history and principles of banking, with special references to the United States.

**ECO 3271 Topics in Theory (3).** Welfare economics; analysis of factor markets and income distribution; growth theory. Prerequisites: ECO 3101 and ECO 3203.

**ECO 3303 Development of Economic Thought (3).** Evolution of economic theory and doctrine. Contributions to economic thought from ancient times to J. M. Keynes. Emphasis on institutional forces shaping the continuum of economic thinking.

**ECO 3431 Applied Macroeconomics (3).** Aggregate economic performance and business conditions analysis. The nature and causes of business fluctuations. Economic expansions and stagflation. Public policies for economic stability; fiscal policy, monetary policy and income policy. Sectoral analysis and macroeconomic forecasting. Recommended preparation: ECO 3011 and ECO 3021.

**ECO 3930, 3931 Special Topics in Theory (3,3).** Study of a particular topic or a selected number of topics in economics theory not otherwise offered in the curriculum. Prerequisites: ECO 3101

and ECO 3203 or permission of the instructor.

**ECO 3933 Special Topics (3).** A course designed to give students a particular topic or a limited number of topics not otherwise offered in the curriculum.

**ECO 3949 Cooperative Education in Economics (1-3).** A student majoring in Economics may spend one or two semesters fully employed in industry or government in a capacity relating to the major.

**ECO 4224 Issues in Money and Banking (3).** Formulation and execution of monetary policy. Analysis of monetary policy as it has been carried out in recent years, and as it should be conducted.

**ECO 4321 Radical Political Economy (3).** The relationship between Marxist and orthodox economists. Attention given to the New Left and other current criticisms of capitalist economies. Multinational corporate policy, concentration of economic power, income distribution, and Third World development.

**ECO 4401 Introduction to Mathematical Economics (3).** Mathematical formulation of economic theory. Mathematical treatment of maximizing and optimizing behavior; applications to consumer and business firm theory, value, economic strategies, growth and stability. Emphasis on understanding of analytical techniques. Recommended preparation: ECO 3101 or ECO 3203, and Calculus.

**ECO 4410 Measurement and Analysis of Economic Activity (3).** Statistics with special reference to economics, including the following topics: quantitative economics, descriptive statistics, probability and inference, and regression analysis applied to economics. Prerequisite: STA 3122 or permission of instructor.

**ECO 4421 Introduction to Econometrics (3).** Introduction to measurement in economics; numerical evaluation of mathematical models by statistical methods; survey of classical models; discussion of the scope and method of econometric analysis. Prerequisites: ECO 3101, ECO 3203, and ECO 4410 or permission of instructor.

**ECO 4504 Economics of Government Spending and Taxation (3).** Describes the way resources are allocated in a market economy and cases where markets fail. Analyzes government expenditure policy, principles of taxation, and the various taxes in use today. Prerequisites: ECO 3011 and ECO 3021.

**ECO 4622 Economic Development of the United States (3).** The growth of the American economy from colonial times to the present. Special emphasis on market forces, institutional arrangements, and policies contributing to this process.

**ECO 4623 American Business History (3).** The growth of American business from 1880 to present; integration, diversification, and foreign expansion. Business strategies and managerial structures.

**ECO 4632 European Economic History (3).** The development of Mediterranean and Western European economies, from the earliest times to the 20th Century. Attention is centered on capital accumulation, technology, trade, industrialization, monetary factors, and the role of government in economic organization.

**ECO 4701 World Economy (3).** A broad overview of the international economy in historical perspective. Topics: economic demography, trade flows, capital movements, diffusion of technology, the emergence of transnational institutions. The student obtains a conception of how economic interdependence has developed.

**ECO 4703 International Economics (3).** Principles of international trade and balance of payments; significance of geographic, economic, social, and political influences; current problems in international trade and payments; tariffs and commercial policy; role of international organizations. Recommended preparation: ECO 3101.

**ECO 4713 International Monetary Relations (3).** International money and capital markets; international financial institutions. Interpretation of balance of payment statements. Adjustments to disequilibria, through changes in prices, exchange rates, and national income. Recommended preparation: ECO 3203.

**ECO 4733 Multinational Corporation (3).** Growth and development of multinational enterprise. Theories of direct foreign investment. Impact on the United States and other developed and less developed nations. Policy implications relating to employment, economic growth, balance of payments, taxation, and national defense. National sovereignty and the multinational corporation.

**ECO 4906 Undergraduate Tutorial (3).** Supervised readings, individual tutorial, and preparation of reports. Requires consent of faculty supervisor and Department Chairperson.

**ECO 4932, 4933 Special Topics in Theory (3,3).** Study of a particular topic or a selected number of topics in economics theory not otherwise offered in the curriculum. Prerequisites: ECO 3101 and ECO 3203 or permission of the instructor.

**ECO 4934 Special Topics (3).** A course designed to give students a particular topic or a limited number of topics not otherwise offered in the curriculum.

**ECO 4949 Cooperative Education in Economics (1-3).** A student majoring in economics may spend one or two semesters fully employed in industry or government in a capacity relating to the major.

**ECO 5709 The World Economy (3).** Designed to give an overview of the crucial issues in the world economy. The course covers trade, capital, labor, and technology flows; transnational economic organizations; current economic crisis; global economic interdependence; and the nature and characteristics of international economic order. Required for MIB Program.

**ECO 5735 Multinational Corporations (3).** Economic theory and multinational corporations. Economic effects. Consequences of nationalization. Spread of the multinational form. State-owned multinational corporations. Prerequisite: Permission of instructor for undergraduates.

**ECO 5906 Advanced Individual Study (3).** Supervised readings, individual tutorial, and preparation of report. Requires consent of faculty supervisor and Department Chairperson. Open to seniors and graduate students.

**ECO 5936 Special Topics (3).** A course designed to give students a particular topic or a limited number of topics not otherwise offered in the curriculum.

**ECO 5945 Internship (3).** Directed individual study which assists the student in using economic analysis in his employment. Prerequisite: Permission of the instructor.

**ECP 3123 Economics of Poverty (3).** Poverty in the United States: its measurement and history. Theory of personal income distribution. Present and proposed policies to alleviate poverty.

**ECP 3302 Introduction to Environmental Economics (3).** Economic principles applied to environmental problems. Relationship of market and non-market forces to environmental quality. Development of tools for policy analysis.

**ECP 3553 Health Systems Economics (3).** Identification of health systems issues and basic instruments of health systems analysis including the market mechanism, insurance and cost-benefit analysis.

**ECP 3613 Introduction to Urban Economics (3).** Study of the urban environment, its characteristics and trends. Location behavior of firms and households. Urban financial problems, transportation, and housing.

**ECP 4004 Seminar on Current Economic Topics (3).** Faculty and student discussion of contemporary economic and social issues.

**ECP 4203 Introduction to Labor Economics (3).** Basic introduction to supply and demand for labor. Discusses labor markets in both historical and institutional context emphasizing why certain patterns have occurred and contemporary institutions developed. Prerequisite: ECO 3021.

**ECP 4204 Theory of Labor Economics (3).** Neo-classical theory of labor demand and labor supply, human capital theory and critiques. Current programs of human resource development and income maintenance are discussed. Prerequisite: ECO 3101.

**ECP 4314 Land and Resource Economics (3).** Availability, use, and control of land and other natural resources. Resource conservation, investment, and taxation. Environmental implications. Resource markets and pricing.

**ECP 4403 Economic Policy for Industry (3).** Governmental activities affecting business. Government regulation of business-its historical, legal, and economic perspectives, including recent developments in the United States and abroad. Government assistance to business; proposed policies. Recommended preparation: ECO 3101.

**ECP 4622 Regional Economic Growth Management (3).** Combines natural resource economics and the economics of public decision-making to identify and evaluate costs and benefits of public policies for managing rapid population change. Prerequisites: ECO 3011 and ECO 3021.

**ECS 3003 Comparative Economic Systems (3).** Analysis of alternative economic systems of industrialized and emerging nations. Emphasis on the comparative study of the capitalist, socialist, and communist economic systems of the modern world.

**ECS 3402 The Political Economy of South America (3).** An introduction to the political economy of the Latin American nations. Designed as a basic course to give the student an overview of the political economy of the nations with which we share this hemisphere.

**ECS 3440 Economics of Central America (3).** Survey of recent economic history of Central American countries, dealing with the institutional background and the structure of current economic activities. Special attention devoted to current problems of economic growth and social transformation.

**ECS 4013 Introduction to Economic Development (3).** Analysis of institutional and structural factors which determine the course of economic progress in developing countries. Characteristics of less developed areas: agriculture, investment, technology, population, international trade, economic integration.

**ECS 4403 The Latin American Economies (3).** Survey of economic status and problems of the Latin American nations, with special emphasis on the larger countries. Attention is given to the role of foreign intervention and dependence, and to different attempts at economic integration.

**ECS 4404 Economic Integration/Latin America (3).** Analysis of the methods, meaning and implications of economics in Latin America. Designed to enable the student to appreciate the trend toward regionalism and economic cooperation. Prerequisite: ECO 3021.

**ECS 4430 The Economic Development of Cuba / Past and Present (3).** Survey of the Cuban economy under capitalist and Marxist ideologies. Emphasis on the transition stage and on current policies of economic and social change.

**ECS 4432 Economic Integration / Caribbean (3).** Analysis of the methods, meaning, and implications of economic integration in the Caribbean. Designed to enable the student to appreciate the trend toward regionalism and economic cooperation.

**ECS 4433 Economics of the Caribbean (3).** Survey of the economic systems of the major British, French, Dutch, and Spanish areas in the Caribbean. Special attention devoted to current problems of economic growth and social transformation.

**ECS 5005 Comparative Economic Systems (3).** A critical evaluation of the design, goals, and achievements of economic policies in capitalist and socialist economies. Prerequisite: Permission of instructor for undergraduates.

**ECS 5025 Economic Planning (3).** Analysis of planning methods in capitalist and socialist economies. Evaluation of macro and micro economic planning tools (input-output) and programming techniques. Theory and practice of economic development planning of agriculture, industrialization, foreign trade, and manpower. Prerequisite: Graduate standing or permission of the instructor.

## English

**Asher Z. Milbauer,** *Associate Professor and Chairperson*
**Harry T. Antrim,** *Professor*
**St. George Tucker Arnold,** *Associate Professor*
**Lynne Barrett,** *Associate Professor*
**Lynn M. Berk,** *Associate Professor*
**Gisela Casines,** *Assistant Professor*
**Maneck Daruwala,** *Associate Professor*
**John Dufresne,** *Assistant Professor*
**Richard A. Dwyer,** *Professor*
**Charles Elkins,** *Professor and Vice Provost*
**Mary Jane Elkins,** *Associate Professor*
**Peggy Endel,** *Associate Professor*
**John Ernest,** *Assistant Professor*
**Mary Free,** *Associate Professor*
**Virginia Gathercole,** *Associate Professor*
**Peter Hargatal,** *Instructor*
**Jeffrey Knapp,** *Instructor*
**James Hall,** *Professor*
**Tometro Hopkins,** *Instructor*
**Kenneth Johnson,** *Associate Professor*
**Kathleen McCormack,** *Associate Professor*
**Carmela Pinto McIntire,** *Associate Professor*
**Sheila Post-Lauria,** *Assistant Professor*
**Robert Ratner,** *Instructor*
**Meri-Jane Rochelson,** *Assistant Professor*
**Richard Schwartz,** *Associate Professor*
**Ronn Silverstein,** *Instructor*
**Ellen Sprechman,** *Lecturer*
**Lester Standiford,** *Professor*
**Richard Sugg,** *Professor*
**Donald Watson,** *Professor*
**Butler H. Waugh,** *Professor*
**Robert Weinberger,** *Instructor*
**Barbara Weltz,** *Instructor*
**C. Kemp Williams,** *Assistant Professor*
**Mehmet Yavas,** *Associate Professor*

## Bachelor of Arts in English

### Lower Division Requirements

**Recommended Courses:**

| | |
|---|---|
| ENG 2012 | Approaches to Literature |
| AML 2011 | Survey of American Literature I |
| AML 2020 | Survey of American Literature II |
| ENL 2012 | Survey of British Literature I |
| ENL 2022 | Survey of British Literature II |

To qualify for admission to the program, FIU undergraduates must have met all the lower division requirements including CLAST, completed 60 semester hours, and must be otherwise acceptable into the program.

### Upper Division Requirements

(30 hours in 3000 and 4000 level courses)

**Periods:** (Two courses - Six hours)

a. One course in British literature before 1800

or

One course in American literature before 1850

b. One course in British literature after 1800

or

One course in American literature after 1850

*Note:* In addition to these courses, the Department may designate specific courses each semester which will fulfill these requirements.

**Shakespeare:** (One course - Three hours)

| | |
|---|---|
| ENL 4320 | Shakespeare: Histories |
| ENL 4321 | Shakespeare: Comedies |
| ENL 4322 | Shakespeare: Tragedies |

**Linguistics:** (One course - Three hours)

| | |
|---|---|
| LIN 3013 | Introduction to Linguistics |
| | or |
| LIN 4341 | Modern English Grammar |

**Electives:** (18 hours)

Upper division electives in writing, film, literature, and/or linguistics. The English Department recognizes a continuing obligation to insure that its majors write well. The Chairperson may require any English major to take the appropriate composition course. An English major may choose to take a general program of English studies or may select one of the Department's three areas of emphasis: literature, language and linguistics, or creative writing. Majors should choose their English courses and electives in consultation with their advisors, especially upon entering the program.

**Additional Approved Electives:** (30)

Students should consult with a departmental advisor.

## Minor

Students majoring in any other discipline may minor in English.

There are several advantages for obtaining this minor. First, students expand their knowledge of literature written in English, thus, make their college education more complete and rounded. Second, because in the courses that the Department of English offers writing skills are emphasized, students will polish and perfect forums for the development of complex and sophisticated arguments through the analysis of literary work; the training students receive in these courses will help them to point to the strengths and weaknesses of any piece of writing.

### Requirements

Fifteen hours in 3000 and 4000-level courses

**Period Courses:** (Two courses - Six hours)

1. One course in British literature before 1800

   or

   One course in American literature before 1850

2. One course in British literature after 1800

   or

   One course in American literature after 1850

*Note:* In addition to these courses, the Department may designate specific courses each semester which will fulfill these requirements

3. Three courses (15 hours) at the 3000 and 4000-level in the Department of English.

## Course Descriptions

### Definition of Prefixes

AML-American Literature; CRW-Creative Writing; ENC-English Composition; ENG-English-General; ENL-English Literature; HUM-Humanities; LIN-Linguistics; LIT-Literature; MMC-Mass Media Communication.

**AML 2011 Survey of American Literature I (3).** Students read and discuss major American works written between 1620 and 1865. Works will be considered in an historical context.

**AML 2020 Survey of American Literature II (3).** Students will read and discuss major American works written between 1865 and the present. Works will be examined in an historical context.

**AML 3271 Afro-American Literature (3).** Study of Afro-American literature from Phyllis Wheatly to James Baldwin. May be repeated.

**AML 4213 Studies in Colonial and Early American Literature (3).** Students read, discuss, and write about literature of the Colonial and Early American periods from the time of the Puritans through the period of the Early Republic.

**AML 4225 Studies in Nineteenth-Century American Literature (3).** Students read, discuss, and write about literature of 19th Century America including works of early Romanticism, Transcendentalism, and the rise of realism.

**AML 4245 Modernism and Post-Modernism in American Literature (3).** The course provides working definitions of modernism and post-modernism and will consider how the writers of the twentieth century use those outlooks while addressing political, social, and personal issues.

**AML 4300 Major American Writers (3).** Each section of this course will consider the works of one, two, or three major American writers. The writers studied in this course will change from semester to semester. The course may be repeated for credit.

**AML 4503 Periods in American Literature (3).** Individual sections will read and discuss works in the context of such historical settings as the colonial, federal, antebellum, reconstruction, or modern periods of the American past. May be repeated.

**CRW 2001 Introduction to Creative Writing (3).** Beginning course designed to acquaint students with elementary critical vocabulary and writing skills necessary for the writing of poems and short fiction. Students may also be required to read and discuss published writing. Prerequisite: ENC 1101 and ENC 1102 or equivalent.

**CRW 3111 Narrative Techniques (3).** Analysis of and exercises in the elements of fiction: point of view, conflict, characterization, tone. Students will do various short assignments and one short story. Reading of published fiction will also be required. Prerequisite: CRW 2001.

**CRW 3311 Poetic Techniques (3).** Analysis of and exercises in poetic techniques. Students will write poems in which they employ one or more technical skills. Reading and discussion of published poems will be required. Prerequisite: CRW 2001.

**CRW 4110 Writing Fiction (5).** An intermediate course in writing fiction. Prerequisite: CRW 3111.

**CRW 4310 Writing Poetry (5).** An intermediate course in writing poetry. Prerequisite: CRW 3311.

**CRW 4930 Special Topics in Creative Writing (1-5).** A course designed to give students an opportunity to pursue special studies in aspects of creative writing not otherwise offered. May be repeated. Prerequisite: CRW 2001.

**CRW 4931 Special Topics in Creative Writing (1-5).** Gives students an opportunity to pursue special studies in aspects of creative writing not otherwise offered. May be repeated. Prerequisites: CRW 2001 and three hours of CRW on the 3000/4000 level.

**CRW 4900 Independent Study in Creative Writing (3).** Development and completion of an independent project in creative writing undertaken with the consent of the instructor. Prerequisite: CRW 2001.

**AML 5305 Major American Literary Figures (3).** Each section will consider the lifework of several authors such as Hawthorne, Melville, Whitman, Twain, James, Faulkner, Mailer, Wright, Baldwin. May be repeated.

**AML 5505 Periods in American Literature (3).** The literature and criticism regarding one specified period of American Literature, such as Colonial, Federal, Transcendental, Antebellum, and Twentieth Century. May be repeated with change of period. Prerequisite: Permission of instructor.

**CRW 5130 Advanced Fiction Workshop (5).** Practice in the techniques and analysis of fiction through the reading, discussion and revision of student manuscripts in a workshop setting. May be repeated. Prerequisite: Nine hours undergraduate CRW coursework.

**CRW 5331 Advanced Poetry Workshop (5).** Practice in the techniques and analysis of poetry through the reading, discussion and revision of student manuscripts in a workshop setting. May be repeated. Prerequisite: Nine hours undergraduate CRW coursework.

**CRW 5620 Advanced Screenwriting Workshop (5).** Practice in the techniques and analysis of screenwriting through the reading, discussion, and revision of student manuscripts in a workshop setting. May be repeated. Prerequisite: Nine hours undergraduate CRW coursework.

**CRW 5934 Special Topics in Creative Writing (1-5).** A course designed to give students an opportunity to pursue special studies in aspects of creative writing not otherwise offered. May be repeated.

**CRW 5935 Special Topics in Creative Writing (1-5).** Gives students an opportunity to pursue special studies in aspects of creative writing not otherwise offered. May be repeated. Prerequisites: CRW 2001 and three hours of CRW on the 3000/4000 level.

**CRW 5940 Advanced Independent Study in Creative Writing (1-5).** Development and completion of a graduate level independent project in creative writing undertaken with the consent of the instructor. Prerequisite: Graduate standing and permission of instructor.

**ENC 1101 Freshman Composition (3).** Students will be introduced to the principles and process of expository, persuasive, and reflective writing. The first of a two-semester freshman composition sequence.

**ENC 1102 Techniques of Interpretation (3).** A continuation of ENC 1101. Develops an analytical/aesthetic sensitivity to the writings of others and further explores the techniques of composition and library research.

**ENC 1137 Essay Writing (3).** A course in writing short descriptive, analytic, and argumentative essays. Does not fulfill core curriculum requirement. Students who have completed ENC 1101 or ENC 1102, or both, cannot receive credit for this course.

**ENC 2301 Expository Writing (3).** An advanced composition course in the techniques of exposition, argumentation, and persuasion.

**ENC 3200 Business Letter and Reports (3).** Intensive instruction and practice in the organization, content, and style of business letters of all kinds: special correspondence formats (bid proposals, customer relations), memoranda, feasibility reports, speeches, and group conference reports.

**ENC 3210 Technical Writing (3).** Effective presentation of technical and semi-technical information: technical description, information gathering, general technical reports, organization and development of information, process communication.

**ENC 3211 Report and Technical Writing (3).** For business, professional, and scientific students needing practice in collecting, organizing, interpreting, and presenting factual material.

**ENC 3311 Advanced Writing and Research (3).** Provides instruction in the concepts and methods of critical response and argumentation, and in the formulation, analysis, and presentation of original research in extended academic papers. Prerequisites: ENC 1101, ENC 1102 or equivalent.

**ENC 3316 Writing Across the Curriculum (3).** An interdisciplinary, upper division, Gordon Rule, writing course in which students explore substance and style as they compose essays on subjects from various fields.

**ENC 4240 Report Writing (3).** Instruction and practice in writing reports for practical purposes. Collecting, organizing, and interpreting facts, then writing up findings in report form and style. Includes recommendation reports, use of graphical elements, writing manuals and instructions, physical research reports, feasibility reports, progress reports, other specialized report formats. Prerequisite: ENC 3200 or ENC 3210.

**ENC 4241 Scientific Writing (3).** Develops skills necessary to write laboratory reports, scientific proposals, articles, research reports, progress reports, and seminar presentations.

**ENC 4930 Special Topics in Composition (3).** Allows students to refine nonfiction writing skills in a variety of genres and roles. May be repeated. Prerequisites: ENC 1101, ENC 1102 or equivalent.

**ENG 2001 Modes of Inquiry (3).** A research and report writing course. A final research project is required. Basic bibliographical tools, library use, and technical and scientific reporting will be the main subject matter. There will also be an emphasis on style, structure, and tone in a variety of research modes.

**ENG 2012 Approaches to Literature (3).** In this course, students will study the process of analyzing the meaning and artistry of literary texts. They will read and interpret representative poems, short stories, and plays.

**ENG 2100 Introduction to Film (3).** This course will introduce students to the basic artistic and compositional elements of film and the analysis of the relationship between technical and

aesthetic aspects of film. Prerequisite: ENC 1101.

**ENG 3138 The Movies (3).** Viewing and discussion of films, with attention to cinematic ways of story-telling and to the popular film as an expression of cultural values. May be retaken for credit with change of content.

**ENG 3949 Cooperative Education in English (1-3).** A student majoring in English may spend several semesters fully employed in industry or government in a capacity relating to the major. Prerequisite: Permission of Cooperative Education Program and major department.

**ENG 4014 History of Literary Criticism (3).** A study of the major texts in literary criticism and theory from Plato to the present.

**ENG 4022 Rhetoric and Poetics (3).** Ancient and modern theory and practice in discussing the formal properties of elevated language.

**ENG 4121 History of the Film (3).** Discussion, with examples, of the development of cinematic art, from its European and American beginnings to its place as a major world art form.

**ENG 4132 Studies in the Film (3).** Intensive examination of the work of a particular nation, group, or director. May also explore various film genres, e.g., documentary, horror, the Western. With change of content, may be retaken for credit.

**ENG 4906 Independent Study (VAR).** Individual conferences, assigned readings, and reports on independent investigations, with the consent of the instructor.

**ENG 4936 Honors Seminar (3).** Designed specifically for honors students and other superior, highly motivated students. Seminar topics will vary from semester to semester.

**ENG 4949 Cooperative Education in English (1-3).** A student majoring in English may spend one or two semesters fully employed in industry or government in a capacity relating to the major. Prerequisite: Permission of Cooperative Education Program and major department.

**ENG 5009 Literary Criticism and Scholarship (3).** Techniques and goals of humanistic research, bibliography, and critical commentary.

**ENG 5018 Practical Criticism (3).** Applies various critical theories - e.g. the formalistic, historical, structural, archetypal, sociological, etc. - to specific literary productions.

**ENG 5058 Form and Theory of Contemporary Literature (3).** Various approaches and theories of practice in the major genres of imaginative writing, including development and articulation of the creative esthetic. May be repeated. Prerequisite: Permission of instructor.

**ENG 5907 Independent Study (VAR).** Individual conferences, assigned readings, reports on independent investigations, with the consent of the Chairperson.

**ENL 2012 Survey of British Literature I (3).** Students will read and discuss major British works written from the Old English period through 1750. Works will be examined within an historical context.

**ENL 2022 Survey of British Literature II (3).** Students will read and discuss major British works written between 1750 and the present. The works will be examined in an historical context.

**ENL 3112 Development of the Novel: The 18th Century (3).** A study of the development of the novel in England from the early attempts by Defoe and others to the Gothic novel.

**ENL 3122 Development of the Novels: The 19th Century (3).** A study of the development of the novel in England from Austen to Henry James; some of the novelists to be discussed are Bronte, Eliot and Dickens.

**ENL 3132 Development of the Novel: The 20th Century (3).** A study of the development of the novel in England from Conrad to the present; some of the novelists to be discussed are Lawrence, Woolf, and Joyce.

**ENL 4210 Studies in Medieval Literature (3).** Students will read, discuss and write about works of medieval English literature from the time of Beowulf to that of Chaucer.

**ENL 4220 Studies in Renaissance Literature (3).** Students will read, discuss, and write about works of the English Renaissance excluding William Shakespeare.

**ENL 4230 Studies in Restoration and 18th-Century Literature (3).** An in-depth study of the major figures in English Literature from 1660 to 1800, a period of transition between the Renaissance and modern times. Some of the writers who will be studied are Dryden, Pope, Swift, Jonson, and Fielding.

**ENL 4260 Studies in 19th-Century British Literature (3).** Students will read, discuss, and write about literary works produced by British Romantic and Victorian writers between the Age of Wordsworth and the death of Queen Victoria.

**ENL 4273 Studies in Modern British Literature (3).** This course focuses on the literature of the 20th Century, limiting itself to British writers, but including the various genres of the modern and post modern periods.

**ENL 4303 Major British Writers (3).** Each section will consider the lifework of an author such as Chaucer, Spenser, Milton, Pope, Wordsworth, Dickens, Browning, Joyce, or others. May be repeated.

**ENL 4320 Shakespeare: Histories (3).** Reading and informal dramatic interpretation of representative plays.

**ENL 4321 Shakespeare: Comedies (3).** Reading and informal dramatic interpretation of representative plays.

**ENL 4322 Shakespeare: Tragedies (3).** Reading and informal dramatic interpretation of representative plays.

**ENL 4503 Periods in English Literature (3).** Individual sections will read a group of literary works from one specified period of English literature, such as the Medieval, Renaissance, Victorian, twentieth-century and contemporary periods. May be repeated with change of period.

**ENL 5220 Major British Literary Figures (3).** Each section will consider the lifework of an author such as Chaucer, Spenser, Milton, Pope, Wordsworth, Dickens, Browning, Joyce, or others. May be repeated.

**ENL 5505 Periods in English Literature (3).** The literature and criticism regarding one specified period of English Literature, such as Medieval, Renaissance, Victorian, Twentieth Century, and Contemporary. May be repeated with change of period. Prerequisite: Permission of instructor.

**LIN 5017 Cognitive Linguistics (3).** Explores the nature of human reason and categorization as revealed by language. Examines the role of the metaphor, imagination, and bodily experience in human thought processes. Prerequisites: LIN 3013, or LIN 3010, or the equivalent, or permission of instructor.

**LIN 5018 Introduction to Linguistics (3).** Introduction to Linguistic theory and analysis, with special emphasis on the major components of languages and modern approaches to their analysis.

**LIN 5107 History of the English Language (3).** Study of the development of the grammar and vocabulary represented in samples of the English language from the 8th century to modern times. Prerequisite: LIN 3013 or permission of instructor.

**LIN 5108 Language Universals (3).** Universal properties of language from two major perspectives: those of Typologists and of Universal Grammarians. A variety of linguistic structures and theoretical explanations are examined. Prerequisite: LIN 3013, or LIN 3010, or LIN 5018, or the equivalent.

**LIN 5146 Historical and Comparative Linguistics (3).** The study of linguistic methodology for determining historical and genetic relationships among languages. Diachronic syntax and its methodology will be included. The relevance of historical comparative linguistics to similar processes found in language acquisition and to socio-linguistics will be studied. Prerequisite: LIN 5206.

**LIN 5206 Phonetics (3).** The study of the articulatory mechanisms used in producing speech sounds and of their acoustic properties. Ear training in the phonetic transcription of speech sounds used in the world's languages.

**LIN 5431 General Morphology and Syntax (3).** The study of linguistic methodology for determining the morphological and syntactic structures of languages. Distinct theoretical approaches to analysis will be emphasized. The student will study recent developments in linguistics that bear on language-universal and language-specific aspects of morphology and syntax. Prerequisite: Introductory course in Linguistics or permission of instructor.

**LIN 5501 English Syntax (3).** This course will focus on syntactic analysis of English. Although the course itself is non-theoretical, it uses a variety of underlying theoretical approaches to train students in syntactic analysis.

**LIN 5715 Speech Errors and Linguistic Knowledge (3).** The study of the processes underlying normal first-language acquisition. The focus is on the development of the subsystems of language (i.e., the phonological, morphological, syntactic, and semantic subsystems) in the child's growing command of his native language.

**LIN 5732 Speech Errors and Linguistic Knowledge (3).** This course focuses on the nature of linguistic errors produced by speakers in their native languages. Students will read research on errors produced by adult native speakers of a language, on first-language errors of children, and on errors made by persons acquiring a second language. Prerequisite: LIN 3013 or LIN 3010.

**LIN 5748 Applied Linguistics: Theory and Applications (3).** Theoretical & practical approaches to second-language acquisition. Examination of & hands-on experience with early and recent approaches (Contrastive Analysis, Error Analysis, Parameter Setting, etc.)

**LIN 2002 Introduction to Language (3).** The study of the nature of human language, its origins, and its relation to thinking behavior, and culture. An examination of the similarities and differences between spoken human languages, animal languages, and nonverbal communication (including sign language); of language variation between dialects and between different historical stages of a language; and of writing systems.

**LIN 3013 Introduction to General Linguistics (3).** Study of the sounds, vocabulary, and sentence patterns of standard modern English. Other topics include meaning, social and regional dialects, language change, and style.

**LIN 3670 Grammatical Usage (3).** The study of formal, traditional usage of English grammar and mechanics. Prerequisites: ENC 1101 and ENC 1102.

**LIN 4122 Historical Linguistics (3).** The study of linguistic methodology for determining historical and genetic relationships among languages. Prerequisite: Introductory course in Linguistics or permission of instructor.

**LIN 4321 General Phonology (3).** The study of phonological processes in language and linguistic methodology for phonological analysis. Prerequisite: Introductory course in Linguistics or permission of instructor.

**LIN 4430 General Morphology and Syntax (3).** The study of linguistic methodology for determining the morphological and syntactic structures of languages. Prerequisite: Introductory course in Linguistics or permission of instructor.

**LIN 4612 Black English (3).** This course is a linguistic approach to the characteristics and functions of Black English and the current social controversies surrounding it.

**LIN 4651 Women and Language (3).** Examines the evidence on a variety of questions regarding women and language, including women's speech in English and other languages, "sexist language", and the relationship between language and societal attitudes towards women.

**LIN 4680 Modern English Grammar (3).** Practical study of syntax.

**LIN 4702 Applied Linguistics (3).** Linguistics in the classroom. English as a second language. Stylistics. Dialects. Prerequisite: LIN 3013.

**LIN 4801 Semantics (3).** The study of the semantic structure of languages. The structures underlying the meanings of words and underlying syntactic structures. Prerequisite: Introductory course in Linguistics or permission of instructor.

**LIN 4905 Independent Study (VAR).** This course is designed for students who wish to pursue specialized topics in advanced Linguistics: phonetics, phonology, morphology, syntax, semantics, psycholinguistics, historical linguistics, or language contact. Prerequisite: Introductory course in Linguistics or permission of instructor.

**LIT 2010 Introduction to Fiction (3).** This course offers an introduction to the basic elements of prose fiction: symbolism, plot, imagery, structure, characterization, style, point of view. Prerequisite: ENC 1101.

**LIT 2030 Introduction to Poetry (3).** This course offers an introduction to the basic elements of poetry: imagery, figurative language, diction, style, tone, prosody. Prerequisite: ENC 1101.

**LIT 2040 Introduction to Drama (3).** This course will introduce the student to the basic elements of drama and its various forms, modes, and techniques. Students will read 10-12 plays by representative English, American, and European authors. Prerequisite: ENC 1101.

**LIT 2110 World Literature I (3).** This course surveys the literature of the Western world from the classical period through and including the Renaissance. It gives attention to the themes and world views these works embody, as well as to their artistry.

**LIT 2120 World Literature II (3).** This course surveys the literature of the Western World from the 17th century to the present. It gives attention to the themes and world views these works embody, as well as to their artistry.

**LIT 3050 Forms of Satire (3).** This course will discuss the history and the different forms of satire from the Romans to the present, including the works of Horace, Juvenal, Swift, and Byron.

**LIT 3200 Themes in Literature (3).** Individual sections will read and discuss works relating to topics of current and enduring interest. Discussion of literature as it reflects the identities of men and women: their places in families in past, present, and future societies, in the natural world, and the cosmic order. May be repeated.

**LIT 3331 Classics of Children's Literature (3).** An examination of literary texts that form part of the imaginative experience of children, as well as part of our literary heritage.

**LIT 3383 Women in Literature (3).** Students will examine the images of women created by European and American writers. The course will also explore the roles, historical and contemporary, of women writers.

**LIT 3702 Major Literary Modes (3).** Individual sections will read and discuss the literary expression of heroic, tragic, comic, satiric, mythic, realistic, or others formalized views of human existence. May be repeated.

**LIT 3930 Special Topics (3).** A course designed to give students an opportunity to pursue special studies not otherwise offered.

**LIT 4001 Major Literary Genres (3).** Individual sections will read and discuss the form and development of novels, drama, poetry, short fiction, or such special forms as biographies, folksongs and tales, or essays, among other genres. May be repeated.

**LIT 4041 17th Century Drama (3).** A study of Western European drama of the seventeenth century including Calderon, Jonson, Tirso de Molina, Corneille, Racine, Wycherley, and Congreve.

**LIT 4188 Regional Literature in English (3).** Individual sections will discuss English writing in Ireland, Scotland, Wales, Canada, the Caribbean, India, sub-Saharan Africa, and Oceania, as well as distinctive regions in England and America. May be repeated.

**LIT 4403 Literature Among the Arts and Sciences (3).** Individual sections will relate the study of literature to other disciplines in the humanities, fine arts, the social and natural sciences. May be repeated.

**LIT 4930 Special Topics (3).** A course designed to give groups of students an opportunity to pursue special studies not otherwise offered. May be repeated.

**LIT 5363 Literary Movements (3).** Individual sections will study the authors, works, and audiences involved in such phenomena as Humanism, Mannerism, Romanticism, Symbolism, the Harlem Renaissance, and others. May be repeated.

**LIT 5934 Special Topics (3).** A course designed to give groups of students an opportunity to pursue special studies not otherwise offered. May be repeated.

## Environmental Studies

**John Parker,** *Director, Chemistry*
**Jerry Brown,** *Sociology/Anthropology*
**Ken Boodhoo,** *International Relations*
**Bill Cooper,** *Drinking Water Research Center*
**George Dalrymple,** *Biological Sciences*
**Kelsey Downum,** *Biological Sciences*
**Grenville Draper,** *Geology*
**Maria Espino,** *Economics*
**Kenneth Gordon,** *Biological Sciences*
**Joel Gottlieb,** *Political Science*
**Arthur Herriott,** *Chemistry*
**James Huchingson,** *Philosophy and Religious Studies*
**Farrokh Jhabvala,** *International Relations*
**Suzanne Koptur,** *Biological Sciences*
**Ronald Jones,** *Biological Sciences*
**David Lee,** *Biological Sciences*
**Zaida Morales-Martinez,** *Chemistry*
**Florentin Maurrasse,** *Geology*
**Howard Moore,** *Chemistry*
**Steve Oberbauer,** *Biological Sciences*
**Thomas Pliske,** *Biological Sciences*
**Jim Rotton,** *Psychology*
**William Vickers,** *Sociology/Anthropology*
**Christopher Warren,** *Political Science*

This is an interdisciplinary program involving nine departments in the College: Biological Sciences, Chemistry, Economics, Geology, International Relations, Philosophy and Religious Studies, Political Science, Psychology, and Sociology/Anthropology. The program prepares students to work in professions with an environmental focus. The Bachelor of Science degree program emphasizes the chemical and ecological aspects of environmental analysis. The Bachelor of Arts degree is broader, with an emphasis on the political, social and economic aspects of environmental issues.

### Bachelor of Science in Environmental Studies

#### Lower Division Preparation

**Required Courses**

Equivalent of eight semester hours of both general biology and general chemistry; three semester hours of algebra and trigonometry.

**Recommended Courses**

Energy and the Natural Environment, General Physics.

To qualify for admission to the program, FIU undergraduates must have met all the lower division requirements including CLAST, completed 60 semester hours, and must be otherwise acceptable into the program.

**Lower or Upper Division Requirements**

| | | |
|---|---|---|
| ECO 3021 | Economics, Man and Society - Micro | 3 |
| STA 3122 | Introduction to Statistics | 3 |
| PHY 2023 | Survey of Physics | 3 |
| | or | |
| GLY 1010, | GLY 1010L Physical Geology **plus** | 4 |
| EVR 3010 | Energy Flow in Natural and Man-made Systems | 3 |
| CGS 2060 | Intro to Microcomputers | 3 |

**Upper Division Program:** (60 semester hours)

Recommended Courses

| | | |
|---|---|---|
| ENC 3210 | Technical Writing | 3 |
| POS 2042 | American Government | 3 |

**Required Courses**

| | | |
|---|---|---|
| EVR 4211 | Water Resources | 3 |
| EVR 4231 | Air Resources | 3 |
| EVR 4311 | Energy Resources | 3 |
| ECP 3302 | Introduction to Environmental Economics | 3 |
| PUP 4203 | Environmental Politics and Policy | 3 |
| CHM 3120 | CHM 3120L Quantitative Analysis | 5 |
| CHM 3200, | CHM 3200L Survey of Organic Chemistry | 4 |
| | or | |
| CHM 3210, | CHM 3210L, CHM 3211, CHM 3211L Organic Chemistry I and II | 9 |
| PCB 3043, | PCB 3043L Ecology | 4 |
| EVR 4920 | Environmental Colloquium | 3 |
| EVR 4905 | Independent Study | 3 |

Students are urged to develop an area of specialization of 12 to 15 credits or a minor in consultation with an advisor. Examples are:

| | |
|---|---|
| Water, Air or Energy Resources. Biology; Chemistry; Computer Science; Geology; Ecological Analysis; | 43 semester hours |
| Electives | 17 semester hours |
| Total | 60 semester hours |

## Bachelor of Arts in Environmental Studies

### Lower Division Requirements

Recommended Courses: Natural History of South Florida; Energy and the Natural Environment, College Algebra.

To qualify for admission to the program, FIU undergraduates must have met all the lower division requirements including CLAST, completed 60 semester hours, and must be otherwise acceptable into the program.

**Upper Division Preparation:** (60 semester hours)

**Required Course**

| | | |
|---|---|---|
| ECO 3021 | Economics, Man, and Society - Micro | 3 |

Upper Division Program

**Required Courses**

| | | |
|---|---|---|
| ANT 3403 | Cultural Ecology | 3 |
| ECP 3302 | Introduction to Environmental Economics | 3 |
| EVR 3010 | Energy Flow in Natural and Man-made Systems | 3 |
| EVR 3011 | Environmental Resources and Pollution | 3 |
| EVR 3013C | Ecology of South Florida | 4 |
| EVR 4905 | Independent Study or Community Project | 3 |
| EVR 4920 | Environmental Colloquium | 3 |
| PUP 4203 | Environmental Politics and Policies | 3 |
| REL 3492 | Man and Nature | 3 |
| | | 31 |

**Area of Specialization Courses:** (9 semester hours)

The student must take at least nine additional credits in an approved area of specialization, such as energy and resource management, human ecology, international/political issues, urban/environmental planning and policy, geography or ecology. Minors may be used as an area of specialization.

| | |
|---|---|
| Electives | 20 semester hours |
| Total | 60 semester hours |

### Cooperative Education

Students seeking the baccalaureate degree in environmental studies may also take part in the Cooperative Education Program conducted in conjunction with the Department of Cooperative Education in the Division of Student Affairs. The student spends one or two semesters fully employed in industry or a governmental agency. For further information consult the Department of Cooperative Education.

### Environmental Internships

Students interested in job-related academic internships should contact their advisor. Two internships are regularly available at the Big Cypress Nature Center as Naturalist Assistants (Naples, Fla.). Details on compensation, benefits, and academic credit can be obtained from Dr. J. Gottlieb (Political Science).

## Course Descriptions

(Course descriptions are also found in catalog sections of all participating departments. For assistance see an advisor.)

### Definition of Prefixes

EVR-Environmental Studies.

**EVR 3010 Energy Flow in Natural and Man-made Systems (3).** A course for non-science majors, emphasizing the study of energy flow and energy resources in natural ecosystems, agriculture and the global food and population crises, and land use.

**EVR 3011 Environmental Resources and Pollution (3).** A course for non-science majors, emphasizing air and water pollution, water resources, earth resources, solid waste disposal, noise pollution, and weather patterns.

**EVR 3011L Environmental Science: Poliution Lab (1).** Laboratory and field analyses of topics and concepts covered in EVR 3011. Corequisite: EVR 3011.

**EVR 3013C Ecology of South Florida (4).** A course for non-science majors, offering an introduction to the ecology of South Florida through lectures and a series of field trips into several unique ecosystems, such as the Everglades, hardwood hammocks, and coastal regions. The course also deals with natural resource conservation, wildlife management, endangered species, and wilderness issues.

**EVR 3931 Topics in Environmental Studies (3).** An intensive analysis of several current environmental topics. Recommended for primary and secondary school teachers.

**EVR 3949/EVR 4949 Cooperative Education in Environmental Studies (3).** One semester of full-time supervised work in an outside laboratory taking part in the University Co-op Program. Limited to students admitted to the Co-op Program. A written report and supervisor evaluations will be required of each student.

**EVR 4021 Survey of Environmental Problems I (3).** An in-depth study of four or five environmental problems of current interest and continuing significance. The course requires competency at the college introductory level in at least three of the following: biology, chemistry, geology, physics.

**EVR 4022 Survey of Environmental Problems II (3).** A continuation of EVR 4021.

**EVR 4211 Water Resources (3).** A seminar dealing with various aspects of water use, water pollution problems, chemistry and ecology of South Florida's waters. Ecology is recommended. Prerequisites: CHM 1045 and CHM 1046 or equivalent and general biology.

**EVR 4231 Air Resources (3).** Common air pollutants - their sources and methods of control. Different legislative and administrative approaches will be studied. Prerequisite: CHM 1045 and CHM 1046 or equivalent.

**EVR 4311 Energy Resources (3).** Seminar dealing with power and energy production in modern society, fundamental energy relationships of industrial and domestic processes. Prerequisite: EVR 3010 or PHY 2023 or equivalent.

**EVR 4905 Research and Independent Study (Var).** The student works with a professor on a research project.

**EVR 4920 Environmental Colloquium (1).** An exploration of contemporary ideas on environmental issues. The course brings together faculty and students in a seminar format. Each week a subject will be presented by a faculty member or student and an open discussion will follow.

**EVR 5061 South Florida Ecology: Field Studies (3).** An introduction to the ecology of South Florida through a series of field trips into several unique ecosystems, such as the Everglades, hardwood hammocks, and coastal regions. No science background required.

**EVR 5141 Environmental Nuclear Chemistry (3).** Nuclear reactions and the nature of radioactivity. Properties and uses of radioactive isotopes, fission, and fusion. Introduction to reactor technology. Consent of instructor required.

**EVR 5236 Air Pollution Dynamics (3).** A course designed to give an under-

standing of the fates of atmospheric pollutants. Scavenging processes in the atmosphere; radiation, residence times, chemical reactions, global transport process, point source dispersion and modeling calculations. Prerequisite: EVS 3360 or EVR 4231.

**EVR 5315 Energy Resources and Systems Analysis (3).** Detailed analysis of energy flows in natural and man-made systems. Energy systems analysis. Energy use patterns. Conventional and alternate sources of energy.

**EVR 5907 Research and Independent Study (VAR).** The student works with a professor on a research project. Variable credit.

**EVR 5935 Special Topics (VAR).** A graduate-level course dealing with selected environmental topics. The content will not necessarily be the same each time the course is offered.

**EVR 5936 Topics in Environmental Studies (3).** An analysis of several current environmental topics. Recommended for primary and secondary school teachers.

## Geology

**Florentin Maurrasse,** *Professor and Chairperson*

**Bradford Clement,** *Assistant Professor*

**Charles Connor,** *Assistant Professor*

**Grenville Draper,** *Professor*

**Rosemary Hickey-Vargas,** *Assistant Professor*

**Claudia Owen,** *Lecturer*

**Gautam Sen,** *Associate Professor*

**Edward Robinson,** *Visiting Lecturer*

The Geology Program is designed to prepare students for careers in research, teaching, and other governmental or private agencies. The main objectives of the Department is to contribute to the search for a better understanding of local geological problems, focusing especially on those related to ground water supply; and to conduct research on the geology of the Caribbean region. Well-equipped laboratories expose students to the major techniques of the sciences. The program offers both a rigorous B.S. degree in Geology and a broader-based interdisciplinary B.A. in Geology. Grades of 'D' will not be accepted for required courses in either program option.

### Bachelor of Science

#### Lower Division Preparation

**Required Courses**

General biology (BSC 1010, BSC 1010L); four semester hours of physical geology or equivalent (GLY 1010, GLY 1010L); four semester hours of historical geology (GLY 1100, GLY 1100L); trigonometry and analytical geometry (MAC 2132).

To qualify for admission to the program, FIU undergraduates must have met all the lower division requirements including CLAST, completed 60 semester hours, and must be otherwise acceptable into the program.

**Lower or Upper Division Preparation**

Differential and integral calculus (MAC 3311, MAC 3312); general chemistry (CHM 1045, CHM 1045L, CHM 1046, CHM 1046L, including laboratory); at least eight semester hours of general physics with calculus (PHY 3048, PHY 3048L, PHY 3049, PHY 3049L, including laboratory) or equivalent.

**Upper Division Program:** (60 semester hours)

**Required Courses**

A minimum of 39 semester hours of geology are required:

| | | |
|---|---|---|
| GLY 3200 | Mineralogy | 3 |
| GLY 3200L | Mineralogy Lab | 1 |
| GLY 3220 | Optical Mineralogy | 3 |
| GLY 3220L | Optical Mineralogy Lab | 1 |
| GLY 3760 | Geological Map Analysis | 3 |
| OCE 3014 | Physical Oceanography | 3 |
| GLY 4310 | Igneous and Metamorphic Petrology | 3 |
| GLY 4310L | Igneous and Metamorphic Petrology Lab | 1 |
| GLY 4400 | Structural Geology | 3 |
| GLY 4450 | Principles of Geophysics | 3 |
| GLY 4450L | Principles of Geophysics Laboratory | 1 |
| GLY 4400L | Structural Geology Lab | 1 |
| GLY 4555 | Sedimentology | 3 |
| GLY 4555L | Sedimentology Lab | 1 |
| GLY 4650 | Paleobiology | 3 |
| GLY 4650L | Paleobiology Lab | 1 |
| GLY 4791 | Field Geology and Geologic Mapping | 3 |
| GLY 4910 | Undergraduate Research in Geology | 3 |
| Electives | | 21 |

### Bachelor of Arts

This program is for the student who requires a broad background in geology for a career in science education or public or private administration dealing with earth and environmental sciences.

#### Lower Division Preparation

Four semester hours of physical geology (GLY 1010, GLY 1010L) or equivalent; four semester hours of historical geology (GLY 1100, GLY 1100L); general biology (BSC 1010, BSC 1010L); trigonometry and analytical geometry (MAC 2132) or equivalent.

To qualify for admission to the program, FIU undergraduates must have met all the lower division requirements including CLAST, completed 60 semester hours, and must be otherwise acceptable into the program.

**Lower or Upper Division Preparation**

General chemistry (CHM 1045, CHM 1045L, CHM 1046, CHM 1046L); general physics (PHY 3053, PHY 3048L, PHY 3054, PHY 3049L) or equivalent.

**Upper Division Program:** (60 semester hours)

**Required Courses**

A minimum of 24 semester hours of geology courses which must include the following:

| | | |
|---|---|---|
| GLY 3200 | Mineralogy | 3 |
| GLY 3200L | Mineralogy Lab | 1 |
| GLY 3030 | Environmental Geology | 3 |
| GLY 3760 | Geological Map Analysis | 3 |
| GLY 4650 | Paleobiology | 3 |
| GLY 4650L | Paleobiology Lab | 1 |
| OCE 3014 | Physical Oceanography | 3 |

At least an additional 16 semester hours of 3000 or 4000 level courses must be completed in either geology, other science departments, or in the College of Engineering and Design. These courses must be approved by a Geology Department advisor.

Electives 20

### Minor in Geology

**Required courses**

GLY 1010 and GLY 1100 with labs, and four additional departmentally approved courses with accompanying labs, one of which must be at the 4000 level.

Two more courses must be completed from the following list: GLY 3220, GLY 4310, GLY 4400, GLY 4791, or OCE 3014.

### Cooperative Education

Students seeking the baccalaureate degree in Geology may also take part in the Cooperative Education Program conducted with the Department of Cooperative Education in the Division of Student Affairs. The student spends one or two

semesters fully employed in industry or a government agency. For further information consult the Department of Geology or the Department of Cooperative Education.

## Course Descriptions

*Note*: Laboratories may not be taken prior to the corresponding lecture course. Laboratories must be taken concurrently where noted, but students must register for the laboratory separately.

**Definition of Prefixes**

EVS-Environmental Science; GEO-Geography/Systematic; GLY-Geology; MET-Meteorology; OCE-Oceanography; OCG-Oceanography-Geological; OCP-Oceanography/Physical.

**EVS 4164 Applied Environmental Geology (3).**
**EVS 4164L Applied Environmental Geology Lab (1).** A survey of the geological and geographical factors critical to man's attempt to contend with the natural processes. Construction problems, sewers, waste disposal, dams, ground water, and terrain evaluation in relation to the nature of the underlying substratum. Principles illustrated from South Florida and the Caribbean region in particular. Study of the geological factors involved in future development and growth of these areas, and conservation methods in relation to the geology of these areas. Prerequisites: GLY 1010, GEO 3200, and a sound background in mathematics, physics, and chemistry. Laboratory must be taken concurrently with the course.

**GEO 3200 Physical Geography (3).**
**GEO 3200L Physical Geography Lab (1).** Survey of the physical environment relevant to studies in regional geography and earth sciences. Natural evolution of landforms, and the interacting processes responsible for these features. Environmental modification and deterioration caused by human interaction. Effects of these changes: socio-economic impact and geographic problems. Case studies illustrated from South Florida and the Caribbean region.

**GEO 3510 Earth Resources (3).** A course for non-majors dealing with the nature, origin, and distribution of mineral resources. Geology of petroleum, coal, metals, etc., and problems of their exploitation and depletion.

**GLY 1010 Physical Geology (3).**
**GLY 1010L Physical Geology Lab (1).** A basic introduction to geological materials, structures, and processes. Properties of the common minerals and rocks, evolution of surface features and the internal constitution of the earth are all discussed. One or two field trips are expected. No prerequisites. Lecture and lab must be taken concurrently.

**GLY 1100 Historical Geology (3).**
**GLY 1100L Historical Geology Lab (1).** An introduction to the geological history of the earth and the geological time scale. Evolution of animals and plants. Prerequisite: GLY 1010 or GLY 3030 or equivalent. Lecture and lab must be taken concurrently.

**GLY 3157 Elements of Caribbean Geology (3).** A survey of the geology of the Caribbean and neighboring regions in view of current data and modern concepts of global tectonics. The course summarizes the important points of Caribbean and Central American geology in their relation to mineral and energy resources; natural environmental disasters, especially seismic zones; agriculture; and the geologic potential for future development and industrialization.

**GLY 3200 Mineralogy (3).**
**GLY 3200L Mineralogy Lab (1).** Elementary crystallography; fundamentals of crystal chemistry and physical mineralogy. Classification of common economic and rock forming minerals; structure and classification of silicate minerals. Study of geometric and atomic crystal models and principles, and interpretation of x-ray diffraction and fluorescence techniques. Prerequisites: Physical geology or equivalent and general chemistry. Laboratory must be taken concurrently with course.

**GLY 3220 Optical Mineralogy (3).**
**GLY 3220L Optical Mineralogy Lab (1).** Principles and use of the polarizing petrographic microscope. Optical properties of isotropic, uniaxial and biaxial minerals; solution of optical problems by use of stereographic projections. Prerequisite: GLY 3200 or equivalent. Laboratory must be taken concurrently with course.

**GLY 3030 Environmental Geology (3).**
**GLY 3030L Environmental Geology Lab (1).** The composition and structure of the earth, the internal and external forces acting upon it and the resulting surface features. Case studies and general principles illustrated from South Florida and the Caribbean. Two field trips expected. No prerequisites.

**GLY 3754 Remote Sensing in the Earth Sciences (3).** Remote sensing methods for the exploration and investigation of geologic processes and earth resources; qualitative and quantitative image and airphoto interpretation with emphasis on research and industry applications. Prequisite: GLY 1010 or permission of the instructor.

**GLY 3760 Geological Map Analysis (3).** Laboratory course dealing with analysis of geological maps and sections; theory and method of interpretation of surface outcrops on maps. Properties of simple geological structures. Recommended to be taken prior to GLY 4400 and GLY 4791. Prerequisites: Trigonometry, physical geology or equivalent (e.g. MAC 2132, GLY 3030 or equivalents).

**GLY 3782 Geology Field Excursion (1-3).** A one to three week field excursion in a region of interest to demonstrate the occurrence, appearance and processes of various geological phenomena. Course may be repeated. Prerequisite: GLY 1010.

**GLY 3949/GLY 4949 Cooperative Education in Geology (1-3).** One semester of full-time supervised work in an outside laboratory taking part in the University Co-op Program. Limited to students admitted to the Co-op Program. A written report and supervisor evaluations will be required for each student.

**GLY 4310 Igneous and Metamorphic Petrology (3).**
**GLY 4310L Igneous and Metamorphic Petrology Lab (1).** Genesis, composition, and classification of igneous and metamorphic rocks. Includes studies of experimental solid-liquid phase equilibria and mineral stabilities of silicate systems. Prerequisite: GLY 3320. Laboratory must be taken concurrently with course.

**GLY 4400 Structural Geology (3).**
**GLY 4400L Structural Geology Lab (1).** Nature and origin of rock structures and deformations, primary structures, geometry and description of folds, faults, cleavage, jointing, lineations, and other minor structures. Prerequisites: Physical geology or equivalent, and a sound background in mathematics. Laboratory must be taken concurrently with course.

**GLY 4450 Principles of Geophysics (3).** A general survey of the geophysical principles and methods used for the exploration of the Earth, including gravity, magnetics, electric, electromagnetic, and seismic methods. Prerequisites: GLY 1010 and MAC 3311.

**GLY 4450L Principles of Geophysics Laboratory (1).** Laboratory and field exercises in geophysics, including gravity,

magnetic, electrical and seismic methods. Prerequisite: GLY 3360 or GLY 4400 or permission of instructor. Corequisite: GLY 4450.

**GLY 4555 Sedimentology (3). GLY 4555L Sedimentology Lab (1).** Sedimentary processes in the geological cycles, as illustrated in recent environments. Different groups of sedimentary rocks. Primary and secondary sedimentary structures. Physicochemical properties and diagenetic processes. Analytical techniques applied to modern sedimentology of both loose and lithified sediments. Prerequisites: Physical Geology or equivalent; Mineralogy; Optical Mineralogy; Paleontology, and a sound background in mathematics and chemistry. Laboratory must be taken concurrently with course.

**GLY 4650 Paleobiology (3). GLY 4650L Paleobiology Lab (1).** Development of life as traced through the fossil record. Survey of the main groups of animals commonly found as fossils. Theories of evolution and extinction. Study of the major fossil groups used in biostratigraphic zonation, and as paleoecologic indicators. Prerequisites: Physical and historical geology, general biology, or the instructor's permission. Laboratory must be taken concurrently with course.

**GLY 4730 Marine Geology (3). GLY 4730L Marine Geology Lab (1).** Survey of the main physiographic provinces of the ocean floor. Modern theories concerning the evolution of the crust; continental drift, seafloor spreading. Distribution and thickness of deep-sea sediments, and their relationship to the morphology and evolution of the crust. Deep-sea mineral resources. Marine geology of the Caribbean from recent data. Sea-bed assessment of mineral resources in the Caribbean and neighboring region. Prerequisites: OCE 3014, GLY 1010, or instructor's permission. Laboratory must be taken concurrently with course.

**GLY 4780 Caribbean Mineral Resources Field Trip (3).** A three-week field course in at least two Caribbean islands. Cursory review of the geologic factors governing the occurrence, size, and economic value of mineral deposits. Emphasis is on bauxite, copper, and energy resources. Visit to selected regions of active exploitation and processing plants, as well as abandoned mines and potential sites of future exploitation. Prerequisite: GLY 3157 or instructor's permission.

**GLY 4791 Field Geology and Geologic Mapping (3).** A three-week course to be offered in the United States or in the Caribbean islands. Instruction and practice in methods of geological mapping using topographic base maps and aerial photographs or plane table. Prerequisite: GLY 4400 or equivalent. Open to majors only.

**GLY 4910, GLY 4911 Undergraduate Research in Geology (VAR).** Individual research under the supervision of a professor in the student's field of specialization or interest. Subject may deal with laboratory work, field, and/or bibliographical work. Field research in the Caribbean is encouraged. Variable credit to a maximum of 10 credits. Permission of the student's advisor is required.

**GLY 5021 Earth Sciences for Teachers (3).** Study of geological materials and processes, as covered in Physical Geology, but at a higher level and with additional assignments. Prerequisite: Permission of instructor. Corequisite: GLY 5021L.

**GLY 5021L Earth Sciences for Teachers Laboratory (1).** Study of the properties of minerals and rocks; interpretation of topographic and geologic maps; study of the geology of Florida, including field trips. Prerequisite: Permission of instructor. Corequisite: GLY 5021.

**GLY 5158 Florida Geology (4).** Detailed lithostratigraphic and biostratigraphic analyses of Southeast Florida and their relationship to tectonics, paleoclimates. Prerequisite: GLY 5695 or permission of instructor.

**GLY 5246 Geochemistry (3). GLY 5246L Geochemistry Lab (1).** Origin of chemical elements and principles affecting their distribution in the solar system, solid earth and hydrosphere. Use of chemical data to solve geologic problems. Prerequisites: Physical Geology and General Chemistry.

**GLY 5286 Research Instrumentation and Techniques in Geology (3).** Survey of techniques and instrumentation used in geological research, including computing and data handling. Prerequisite: Graduate standing or permission of instructor. Corequisite: GLY 5286L.

**GLY 5286L Research Instrumentation and Techniques in Geology Lab (1).** Introduction to advanced instrumentation and analytical techniques in Geology, including computing and data processing. Prerequisite: Graduate standing or permission of instructor. Corequisite: GLY 5286.

**GLY 5298 Topics in Geochemistry (3).** Seminar covering current research in selected areas of low-temperature geochemistry: oceans and oceanic sediments; continental waters and sediments; hydrothermal systems. Prequisite: GLY 4555 or permission of instructor.

**GLY 5322 Igneous Petrology and Geochemistry (3).** Presentation and discussion of current topics in igneous petrology and geochemistry in a seminar format. Prerequisite: Permission of instructor.

**GLY 5335 Metamorphic Geology (3).** Metamorphic mineralogy; characteristics of low, medium and high pressure metamorphic rocks; pressure-temperature determinations; metamorphic textures; modeling and determination of P-T-t paths.

**GLY 5335L Metamorphic Geology Lab (3).** Metamorphic mineralogy; characteristics of low, medium and high pressure metamorphic rocks; pressure-temperature determinations; metamorphic textures; modeling and determination of P-T-t paths.

**GLY 5346 Sedimentary Petrology (3).** Systematic study of sedimentary rocks. Special emphasis on genetical aspects, geochemistry, paleontology, mineralogy, and microfacies. Emphasizes microscopic study. Prerequisite: GLY 4555. Corequisite: GLY 5346L.

**GLY 5346L Sedimentary Petrology Lab (1).** Laboratory studies of sediments and sedimentary rocks with emphasis on microscopic analyses and geochemical techniques. Prerequisite: GLY 4555 and GLY 4555L. Corequisite: GLY 5346.

**GLY 5408 Advanced Structural Geology (3).** Advanced treatment of the theory of rock mechanics to solve problems solve natural rock deformation. Prerequisites: GLY 4400, MAC 3413, or permission of instructor. Corequisite: GLY 5408L.

**GLY 5408L Advanced Structural Geology Lab (1).** Problem solving in theory of rock deformation. Experimental procedures in rock mechanics. Corequisite: GLY 5408.

**GLY 5425 Tectonics (3).** Properties of the lithosphere; plate kinematics and continental drift; characteristics of plate boundaries; mountain belts; formation of sedimentary basins. Prerequisites: GLY 1010, 1100, 4400, 4310, 3200 or permission of instructor.

**GLY 5446 Topics in Structural Geology and Tectonics (3).** Selected advanced topics in structural geology and rock deformation. Latest advances in crustal tectonics. Prerequisite: GLY 5408.

**GLY 5455 Physical Volcanology (3).** Description of volcanoes and their products, geophysical and tectonic constraints on volcanic processes, and modeling and forecasting of volcanic eruptions. Prequisite: GLY 4450, GLY 4310 or permission of instructor.

**GLY 5457 Analysis of Geophysical Data (3).** Reduction and interpretation of geophysical data, including time series analysis, continuation of potential fields. Three-dimensional modeling of gravity, magnetic data, integrated geophysical surveys. Prerequisites: GLY 4450, PHY 3048, PHY 3049, MAC 3311, MAC 3312, MAP 3302. Corequisite: GLY 5457L.

**GLY 5457L Analysis of Geophysical Data Lab (1).** Field and laboratory applications of geophysical techniques. Computer aided analysis and three-dimensional modeling of gravity and magnetic data. Prerequisites: GLY 4450, PHY 3048, PHY 3049, MAC 3311, MAC 3312, MAP 3302. Corequisite: GLY 5457.

**GLY 5495 Seminar in Geophysics (2).** Detailed investigation of current geophysical techniques, including topics on instrument design. Prerequisite: GLY 5457 or permission of instructor.

**GLY 5546 Topics in Stratigraphy (3).** Discussion of research projects and/or current literature in stratigraphic correlation as derived from sedimentologic principles and biozonation. Prerequisite: GLY 5346.

**GLY 5608 Advanced Paleontology I (3).** Discussion of current literature and research projects on evolution, systematics functional morphology, with reports by members of the seminar. Prerequisites: GLY 4650, GLY 5609, or permission of instructor.

**GLY 5621 Caribbean Stratigraphic Micropaleontology (3).** Survey of the stratigraphy of biostratigraphic type-sections described in the Caribbean area. Deep-sea stratigraphy from both piston-cores and Deep-Sea Drilling Project samples. Emphasis is placed on planktonic foraminifera and radiolaria species used as index-species in the equatorial-tropical biozonation typified in Cretaceous and Cenozoic Caribbean sediments. Paleobiogeographic and paleoecologic considerations. Considerable time will be devoted to the study and identification of specimens under the microscope. Prerequisite: GLY 4650 or permission of instructor.

**GLY 5785 Caribbean Shallow-Marine Environments (3).** Four-week field study of multiple tropical environments as illustrated in the Caribbean. Physicochemical processes in nearshore arenaceous, argillaceous and calcareous environments. Coral reef morphology, ecology and distribution patterns. Dynamical processes acting on nearshore environments, and their effects on reef growth and distribution. Reef bioerosion. Coastal evolution in response to natural processes. On-site study of some similar emerged environments in the Caribbean islands. Economic importance of tropical shallow-marine environments in world fuel resources. Course includes extensive field work both on land and underwater, and an individual field research project. Qualifications: Open to advanced undergraduate and graduate students in the earth and biological sciences or cognate fields.

**GLY 5826 Hydrogeologic Modeling (3).** Introduction to the techniques used in modeling groundwater flow and solute transport in geologic systems and their application in regional studies. Prerequisites: GLY 5827, MAP 3302, or permission of instructor.

**GLY 5827 Hydrogeology (3).** Recharge and discharge of groundwater, geologic controls on groundwater occurrence, movement and water chemistry. Prerequisite: Physical Geology, Chemistry, or permission of instructor.

**GLY 5931 Graduate Seminar (1).** Presentation or critical examination of current research problems in geology. A selection of topics is considered each term. Topics may also include individual research in the student's field of investigation. Prerequisite: Graduate standing or permission of instructor.

**OCE 3001 Introduction to Oceanography (3).**
**OCE 3001L Introduction to Oceanography Lab (1).** The oceans, their nature and extent. Water of the oceans, chemical balance. Marine provinces, sediments and their relation to sea life and oceanic circulation, coastal provinces, sediments and their relation to sea life and oceanic circulation, coastal and deep-ocean circulation. Waves, tides, tsunamis. One field trip expected.

**OCE 3014 Physical Oceanography (3).** The ocean origin, physical properties, salinity, temperature, sound. Radiative properties, heat budget and climatic control. Tides, wind-driven motion-monsoon circulation. El Nino phenomenon. Subsurface water masses. Oceanic circulation and paleoclimates.

## History

**Mark D. Szuchman,** *Professor and Chairperson*
**Daniel Cohen,** *Assistant Professor*
**John D. French,** *Assistant Professor*
**Howard Kaminsky,** *Professor Emeritus*
**Eric J. Leed,** *Associate Professor*
**Alex Lichtenstein,** *Assistant Professor*
**Felice Lifshitz,** *Assistant Professor*
**Brian Peterson,** *Associate Professor*
**Joyce S. Peterson,** *Associate Professor*
**Gerald Poyo,** *Assistant Professor*
**Darden Asbury Pyron,** *Associate Professor*
**Howard B. Rock,** *Professor*
**Warren T. Treadgold,** *Associate Professor*

### Bachelor of Arts

Students interested in teacher certification should contact the College of Education at 348-2721.

#### Lower Division Preparation

To qualify for admission to the program, FIU undergraduates must have met all the lower division requirements including CLAST, completed 60 semester hours, and must be otherwise acceptable into the program.

Two semesters of Western Civilization; if an entering history major has not met this lower division requirement, the equivalent course must be taken at the University, and will be counted as a non-major elective.

The equivalent courses are:

| | |
|---|---|
| EUH 3110 | Western Culture and Society, Ancient World to Reformation |
| EUH 3208 | Western Culture and Society, The Modern World |

**Upper Division Program:** (60 semester hours)

History majors may take only six credits of lower division history courses as part of the fulfillment of their major requirements.

One course in each of the following areas: (The area numbers are indicated in brackets at the end of each course description)

Medieval Europe or Ancient History [1] 3

| | |
|---|---|
| Modern Europe [2] | 3 |
| The United States [3] | 3 |
| Latin America [4] | 3 |
| HIS 4935 Senior Seminar in History | 3 |
| Any five additional History courses | 15 |
| Electives to make up the prescribed total number of credit hours required for graduation. | 30 |

## Minor in History

Five general History courses (15 semester hours).

## Course Descriptions

### Definition of Prefixes

AMH-American History; EUH- European History; HIS-General; LAH-Latin American History; WOH-World History.

**AMH 2015 Historical Analysis: The American Revolution (3).** Exploration of the nature of the Revolution from 1763 through ratification of the Constitution in 1789. Emphasis on primary sources, historical interpretations and the nature and meaning of the Revolution. Written work meets state composition requirement (6,000 words).

**AMH 2053 Historical Analysis: Democracy in America (3).** The institutions, social order, and mentality of the United States in the 1830s, in reality and in their classic portrayal by Alexis de Tocqueville, Democracy in America. Written work meets state composition requirement (6,000 words).

**AMH 3012 American History, 1600-1763 (3).** The American social colonial experience from the earliest settlements at Jamestown and Plymouth to the eve of the American Revolution. Particular emphasis will be on religion, social structure, politics, and slavery. [3]

**AMH 3100 American History, 1607-1850 (3).** A survey of American history from the founding of Virginia to the antebellum era. Analysis of colonial America, the American Revolution, the Constitution, and the growth of a new republic. [3]

**AMH 3141 American History, 1790-1860 (3).** An exploration of early national U.S. History, with particular attention to party politics, religious pluralism, sentimental culture, reform movements, and economic development.

**AMH 3200 American History, 1850 to the Present (3).** A survey of American history from before the Civil War to our own day. Analysis of the Civil War, Reconstruction, the Gilded Age, the move toward imperialism, and the problems of the 20th Century. [3]

**AMH 3270 Contemporary U.S. History (3).** An examination of the major trends, forces and personalities that have shaped the recent American past. [3]

**AMH 3317 America and the Movies (3).** An examination of the social and cultural history of 20th century America through its movies. [3]

**AMH 3331 American Intellectual History I (3).** This course will trace the origins and development of the main ideas and intellectual themes of Anglo-American history during the colonial and early national period, 1600-1815. It will stress social ideas and popular concepts, and relate them to the formation of dominant American national characteristics. [3]

**AMH 3332 American Intellectual History II (3).** This course will emphasize the full flowering of individualistic liberalism in 19th Century American thought, and trace the implications of and reaction against this tradition down to the present. [3]

**AMH 3444 The Great American West (3).** The course will explore the meaning of the West for both the settlers and modern Americans. Using song, film, novels, art, etc., the course will examine the lives and values of the Indians, mountain men, farmers, ranchers, and cowboys. [3]

**AMH 4130 The American Revolution (3).** An exploration of the nature of the Revolution from the beginning of the conflict in 1763 through the ratification of the Constitution in 1789. Discussion of the political and economic differences between the colonists and England, along with the meaning the war had to the different classes of Americans. [3].

**AMH 4140 Age of Jefferson (3).** A survey of Jeffersonian America (1790-1828) with emphasis on the origins of American politics, the emerging American economy, the rise of American nationalism, and Jeffersonian mind. [3]

**AMH 4160 The Age of Jackson (3).** A survey of Jacksonian America (1828-1850) with emphasis on the growth of political parties, the rise of American industry, the emergence of labor, slavery, and early reform movements. [3]

**AMH 4170 Civil War and Reconstruction (3).** The rise and sources of militant sectionalism in the United States, the war itself, and the restoration of the nation. [3].

**AMH 4230 The Roaring Twenties and the Great Depression (3).** A political, economic, social, and intellectual history of the 1920s and the great depression of the 1930s. [3]

**AMH 4251 The Great Depression (3).** This course deals with the experience of the American people in the Great Depression of the 1930s. It examines causes of the depression, government response, and effectiveness of response, as well as looking at the actual daily experience of people during depression and the changes the depression made in U.S. society. [3]

**AMH 4292 Origins of Modern America, 1877-1920 (3).** U.S. history between the Civil War and World War I, origins of modern American social, cultural, and private life. Impact of industrialization, urbanization, immigration and war on American society, culture between 1877 and 1920.

**AMH 4400 Southern History (3).** An examination of the main themes and social forces that have shaped the southern experience and the southern intellectual tradition in a distinctive way within the larger historical reality of colonial Anglo- America and the United States. The period covered is from initial exploration and settlement of Sir Walter Raleigh and John Smith to the present. [3]

**AMH 4428 History of Miami (3).** The history of Miami and Dade County from the time of the native Americans until today. Students write research papers based on primary sources, as well as archival sources. [3]

**AMH 4560 History of Women in the United States (3).** The changing dimensions of women's lives from the colonial era of U.S. history to the present. The course will examine the changing economic, social, and political position of women as well as the development of feminist movement and organizations. [3]

**AMH 4570 Afro-American History (3).** Black society in the United States and its relation to the political, economic, social, and cultural history of America. [3]

**AMH 4930 Topics in U.S. History (3).** Selected topics or themes in U.S. history. The themes will vary from semester to semester. With a change in theme, the course may be repeated. (The theme will be announced in the yearly schedule). [3]

**AMH 5905 Readings in American History (3).** Students read books from different historiographical traditions and with conflicting interpretations about an important subject in American history.

Subjects will vary according to professors. Course may be repeated with departmental approval. Prerequisite: Graduate standing.

**AMH 5915 Research in American History (3).** Students conduct research in primary and secondary sources on aspects of important subjects in American History. Subjects will vary according to professor. Prerequisite: Graduate standing.

**AMH 5935 Topics in American History (3).** An examination of specific themes or topics in American history. The theme will vary from semester to semester. With a change in theme, the course may be repeated. (The theme will be announced in the yearly schedules.) Prerequisite: Graduate standing.

**EUH 2000 Historical Analysis: The Rise of Western Culture (3).** A survey of Western history from Antiquity to the Renaissance, illustrated by analysis of classic histories written in each period. Written work meets state composition requirement (6,000 words).

**EUH 2015 Historical Analysis: Athens, Sparta, Peloponnesian War (3).** A study of the Peloponnesian War, in Thucydides' classical history, that aims to introduce the student to the subject-matter of Western history and to the habits of critical thinking about the meanings of thought and action. Written work meets state composition requirement (6,000 words).

**EUH 2069 Historical Analysis: The Russian Revolution (3).** A study of the Russian Revolution of 1917: its causes, dynamics, and implications. Written work meets state composition requirement (6,000 words).

**EUH 2074 Historical Analysis: De Tocqueville and the French Revolution (3).** Analysis of the causes and effects of the French Revolution through the eyes of one of its leading interpreters, Alexis de Tocqueville. Written work meets state composition requirement (6,000 words).

**EUH 2123 Historical Analysis: Medieval Holy War (3).** Analysis of the cross-cultural phenomenon of "holy" warfare or the sanctification and glorification of militarism in the Christian crusader movement and the Islamic *jihad*. Written work meets state composition requirement (6,000 words).

**EUH 2235 Historical Analysis: The Romantic Tradition (3).** A study of the Romantic tradition of self-fulfillment from Rousseau and Goethe to the present. Alternative paths of self-fulfillment including socialism and elitism. Written work meets state composition requirement (6,000 words).

**EUH 3021 Europe in the Central Middle Ages (3).** Europe from the ninth to the twelfth centuries, analyzing the disintegration of the empire of Charlemagne and its replacement by nascent national states and by the supra-national papal monarchy [1].

**EUH 3110 Western Culture and Society, Ancient World Reformation (3).** An analysis of the social, political, material and cultural forces which shaped the emergence of Western Civilization. Topics include ancient Greece and Rome, medieval society, and the Renaissance.

**EUH 3121 Europe in the Earlier Middle Ages (3).** The disintegration of the Roman imperial unity and its replacement by Latin, Greek and Arabic cultural spheres, with particular emphasis on the Latin West [1].

**EUH 3122 Europe in the Later Middle Ages (3).** The thirteenth throughout the fifteenth centuries as the prelude to the revolutionary transformations of early modernity e.g., secularization, industrialization, expansionism, scientism and democratization) [1].

**EUH 3142 Renaissance and Reformation (3).** A study of the development of humanism in Italy and Protestantism in Germany, and their impact on Europe in the Fourteenth, Fifteenth, and Sixteenth centuries. [2]

**EUH 3181 Medieval Culture (3).** Selected topics in the cultural history of Europe from 500 to 1500: epic and knightly romance; Christian theology and spirituality; scholastic philosophy; Romanesque and Gothic arts; the rise of literature in the vernacular; the culture of the layman; and the contribution of women. [1]

**EUH 3205 Nineteenth-Century Europe 1815-1914 (3).** This course will deal with the political, diplomatic, economic, social, and cultural history of Europe from 1815 until 1914. Special attention will be given to the Industrial Revolution. [2]

**EUH 3208 Western Culture and Society, The Modern World (3).** An analysis of the main currents of Western Civilization from the Reformation to the present.

**EUH 3245 European History, 1914-1945 (3).** Europe in the era of the two World Wars, with special emphasis on communism and fascism. [2]

**EUH 3282 European History, 1945 to Present (3).** Europe since the Second World War examined in its political, diplomatic, social, economic, and cultural aspects. [2]

**EUH 3400 Greek History (3).** The origins of the Greek polis in Mycenaean times, its domination of civilization in the first millennium B.C., its transformation under Alexander and his successors. The political history, culture, values, and social dynamics of Greek civilization. [1]

**EUH 3411 Ancient Rome (3).** The formation of the Roman republic, its rise to domination in the Mediterranean, its transformation into the Roman Empire, and its final disintegration. The political history, culture, values, social dynamics, and enduring force of the Roman civilization. [1]

**EUH 3460 Germany from Charlemagne to Hitler (3).** An overview of German history with special emphasis on the development of the National Socialist movement. Political, economic, social, and religious aspects of German history will be covered. [2]

**EUH 3570 Russian History (3).** An overview of Russian History from the time of tribal Slavs until today. The course will focus especially on the changing conditions of the Russian peasantry and on the unique development of the Russian state. [2]

**EUH 3576 The Russian Revolution and the Soviet Union (3).** This course deals with Russia since 1917 and focuses particularly on the theory and practice of communism in the Soviet Union. The impact of communism on the lives of the people, whether in politics, economics, or culture, will be examined. [2]

**EUH 3611 European Cultural and Intellectual History (3).** This course will examine the development of the key ideas in European political and social theory, in conceptions of the natural world and of the individual which have come to dominate European culture in the last four hundred years. [2]

**EUH 4186 King Arthur and His Knights (3).** A study of Arthurian romance from the 12th to the 15th Centuries, as the self-image of aristocracy. The following themes will be emphasized: chivalry, adventure, erotic idealism, Christian consecration, and the creation of secular individualism. [1]

**EUH 4187 Topics in Medieval European History (3).** Selected topics or themes in Medieval history. The themes will vary from semester to semester. With a change in content, the course

may be repeated. (The theme will be announced in the yearly schedule). [1]

**EUH 4286 Topics in European History (3).** An examination of selected topics or themes in early modern and modern European history. The themes will vary from semester to semester. With a change in content, the course may be repeated. (The theme will be announced in the yearly schedule). [2]

**EUH 4300 Byzantine History (3).** A survey of the political, cultural, and social history of the Byzantine Empire from 284 to 1461, including Byzantium's contributions to Christian theology, Roman law, and the culture of the Renaissance and eastern Europe [1].

**EUH 4313 History of Spain (3).** A survey of Spanish history from the Reconquista through the Civil War, with particular emphasis on the Golden Age. [2]

**EUH 4440 The Making of Medieval France (3).** A survey of "French" history as a case study in "state building" from the Celtic period and the incorporation of the region into the Roman empire as Gaul to the reign of Philip Augustus [1].

**EUH 4453 The French Revolution and Napoleon (3).** A study of French and European history from 1798 to 1815, with an emphasis on the political development of the Revolution; social groups within France, and the rise of Napoleon. [2]

**EUH 4501 England to 1688 (3).** A survey of ancient, medieval and early modern English history with attention to continental comparisons and contrasts [1].

**EUH 4520 England in the 18th Century (3).** Exploring one of the greatest eras in English history, this course will cover the growth of the British empire, crown and Parliament, the industrial revolution, social problems and English culture. [2]

**EUH 4602 The Enlightenment (3).** This course deals with the French Enlightenment of the Eighteenth Century, particularly with Voltaire, Diderot, and Rousseau. Impact of the Scientific and English Revolutions on Enlightenment. [2]

**EUH 4660 Modern Europe, 1789-Present (3).** European history from the French Revolution until today, with special attention to liberalism, nationalism, socialism, communism, and fascism. The course will touch on the main points of the national histories of the various European states, from Britain to Russia. [2]

**EUH 5905 Readings in European History.(3).** Students read books from different historiographical traditions and with conflicting interpretations about an important subject in European history. Subjects will vary according to professors. Course may be repeated with departmental approval. Prerequisite: Graduate standing.

**EUH 5915 Research in European History (3).** Students conduct research in primary and secondary sources on aspects of important subjects in European History. Subjects will vary according to professor. Course may be repeated with departmental approval. Prerequisite: Graduate standing.

**EUH 5935 Topics in European History (3).** An examination of specific themes or topics in European history. The theme will vary from semester to semester. With a change in theme, the course may be repeated. (The theme will be announced in the yearly schedules.) Prerequisite: Graduate standing.

**HIS 3001 Introduction to History (3).** Approaches to the study of the Western tradition.

**HIS 3308 War and Society (3).** An examination of the ways societies have organized themselves for external and internal wars. The course will also explore the changing conduct of war, the image of the warrior, and the ways in which military institutions have crystalized class structures.

**HIS 3930 Special Topics (3).** An examination of specific themes or topics in history. The theme will vary from semester to semester. With a change in content, the course may be repeated. (The theme will be announced in the yearly schedule).

**HIS 4908 Independent Study (VAR).** Individual conferences, assigned readings and reports on independent investigations, with the consent of the instructor

**HIS 4930 Special Topics (3).** An examination of specific themes or topics in history. The theme will vary from semester to semester. With a change in content, the course may be repeated. (The theme will be announced in the yearly schedule).

**HIS 4935 Senior Seminar in History (3).** A seminar to be taken by all history majors, to provide experience in research, writing, and critical analysis.

**HIS 5289 Comparative History (3).** A study of specific topics in history that cut across regional, national, and chronological lines. The topics will change from semester to semester, and with a change in content, the course may be repeated. (The topic of the course will be announced in the yearly schedule).

**HIS 5908 Independent Study (VAR).** Individual conferences, assigned readings and reports on independent investigations, with the consent of the instructor.

**HIS 5910 Advanced Research Seminar (3).** Small group sessions will analyze particular subject areas in history, with the consent of the instructor.

**HIS 5930 Special Topics (3).** An examination of specific themes or topics in history. The theme will vary from semester to semester, and with a change in content, the course may be repeated. (The theme will be announced in the yearly schedule). Prerequisite: Graduate Standing.

**HIS 5940 Supervised Teaching (3).** The students will work under the close supervision of a regular member of the faculty in a mentorial fashion. The supervision will cover various aspects of course design and delivery in History.

**LAH 2092 Historical Analysis: The Latin Americans (3).** An examination of the evolution of symbols of status and power, and of the socioeconomic relationships among groups within the various Latin American regions. Written work meets state composition requirement (6,000 words).

**LAH 3132 The Formation of Latin America (3).** An examination of Latin America in the colonial period, focusing on conquest, Indian relations, the landed estate, urban functions, labor, and socioeconomic organization from the 15th through the 18th Centuries. [4]

**LAH 3200 Latin America: The National Period (3).** Trends and major problems of Latin American nations from independence to the present. [4]

**LAH 3450 Central America (3).** An overview of Central American history from colonial times to the present, with emphasis on the period after the mid-Eighteenth Century. All five modern nations are dealt with in some detail, while the thematic focus is on social and economic history. Prerequisite: One course in Latin American History or permission of instructor. [4]

**LAH 4433 Modern Mexico (3).** An examination of the central themes of na-

tion-building in Mexico from 1810 to the present: race, land, political authority, regionalism, dictatorship, and the Mexican Revolution. [4]

**LAH 4482 Cuba: 18th - 20th Centuries (3).** The socio-economic and political setting in Cuba since the mid-Nineteenth Century. [4]

**LAH 4511 Argentina: 18th - 20th Centuries (3).** A survey of the social and political formation of the Argentine nation, starting with the colonial legacy and ending with the contemporary political situation. [4]

**LAH 4600 History of Brazil (3).** Origins of Portuguese rule and African slavery; crisis of colonialism and transition to independence; coffee, abolition, and the Brazilian Empire; Republican Brazil and the Revolution of 1930; postwar developments. [4]

**LAH 4932 Topics in Latin American History (3).** Selected topics or themes in Latin American history. The themes will vary from semester to semester. With a change in content, the course may be repeated. (The theme will be announced in the yearly schedule). [4]

**LAH 5905 Readings in Latin American History (3).** Students read books from different historiographical traditions and with conflicting interpretations about an important subject in Latin American history. Subjects will vary according to professors. Course may be repeated with departmental approval. Prerequisite: Graduate standing.

**LAH 5915 Research in Latin American History (3).** Students conduct research in primary and secondary sources on aspects of important subjects in Latin American History. Subjects will vary according to professor. Course may be repeated with departmental approval. Prerequisite: Graduate standing.

**LAH 5935 Topics in Latin American History (3).** An examination of specific themes or topics in Latin American history. The theme will vary from semester to semester. With a change in theme, the course may be repeated. (The theme will be announced in the yearly schedules.) Prerequisite: Graduate standing.

**WOH 1001 Historical Analysis: World Civilization (3).** Comparative histories of major world civilizations, including China, India, the Moslem Middle East, Africa, Latin America, and the West. Emphasis on cultural characteristics and interactions. Written work meets state composition requirement (6,000 words).

**WOH 3281 Jewish History to 1750 (3).** Jewish history from the First Exile in 586 BCE to 1750. The development of Jewish institutions in exile and as a nation, the development of the Talmud and the medieval experience.

**WOH 3282 Modern Jewish History (3).** A survey of the major currents in modern Jewish History. The reaction to the Enlightenment, the American experience, the growth of the Eastern European Shtetl, the Holocaust and the Birth of the State of Israel.

## Humanities

**Ramon Mendoza,** *Professor, Modern Languages, Director of Humanities*
**Fernando Gonzalez Reigosa,** *Associate Professor, Psychology and Dean, Undergraduate Studies*
**Ken Henley,** *Associate Professor, Philosophy*
**Joyce Peterson,** *Associate Professor, History, Associate Dean*
**Richard P. Sugg,** *Professor, English*
**Barbara Watts,** *Assistant Professor, Visual Arts*

### Bachelor of Arts in Humanities

The Humanities program offers a structured interdisciplinary curriculum designed to confront the student with values and issues concerning man and society, extending beyond the scope and methodology of natural and social sciences.

The program focuses primarily upon the human condition, human values, changing views of the world, and society's major concerns. These values, world views, and concerns have been the preferred object of thought and creativity of philosophers, poets, playwrights, fiction writers, artists, mystics and religious thinkers. Their views have become the reservoir of humankind's most outstanding intellectual achievements, and they have also been powerfully expressed in the works of painters, sculptors, and film directors, as well as in other productions of mass media and popular culture, which must now engage the serious student of our culture and its future. The program also pays particular attention to non-Western and American ethnic-minority cultures, in order to expose the student to the different values, world views, and outstanding cultural achievements of these cultures.

For those students particularly interested in Classical Greek and Roman culture, the program offers a well-structured Classical track and a sequence of Greek and Latin courses.

The Humanities program is not only theoretical. It seeks to develop in the student those skills and attitudes which are specifically human, such as skills of verbal and written communication, analytical skills, open-minded and critical attitudes towards the problems of our changing society, artistic sensitivity and expression, and all forms of imaginative creativity. Above all, the program hopes to challenge the student to raise the cultural level of our society by bringing his or her humanistic approach to bear upon institutions, cultural programs, mass media, and the business community.

The Humanities program is not only a richly rewarding program of undergraduate study, but it also prepares students for later success in post-graduate programs in the liberal arts, law school, business, and public affairs.

A Humanities double major is a fine complement to a highly specialized vocational or professional major. In addition, a Humanities minor offers an attractive option both to students in arts and sciences and to those in the other schools of the University.

#### Lower Division Preparation

To qualify for admission to the program, FIU undergraduates must have met all the lower division requirements including CLAST, completed 60 semester hours, and must be otherwise acceptable into the program.

#### Upper Division Program

1. Core: Four courses required (12 semester hours):

| | | |
|---|---|---|
| HUM 3214 | Ancient Classical Culture and Civilization | 3 |
| | or | |
| HUM 4431 | The Greek World[1] | |
| HUM 4920 | Humanities Colloquium | 3 |

Any two courses from the following:

| | |
|---|---|
| HUM 3432 | The Roman World |
| HUM 3435 | The Medieval World |
| HUM 3244 | Renaissance and Baroque Cultures |
| HUM 3246 | The Enlightenment and the Modern World |

2. Six additional Humanities courses taken from any of the above-listed Humanities core courses not taken previously and/or the following interdisciplinary Humanities courses (18 semester hours):

| | |
|---|---|
| HUM 3304 | Values in Conflict |
| HUM 3325 | Women, Culture and History |
| HUM 3306 | History of ideas |

| | |
|---|---|
| HUM 3512 | Art and Society |
| HUM 3545 | Art and Literature |
| HUM 3930 | Female/Male: Women's Studies Seminar |
| HUM 4392 | Human Concerns[1] |
| HUM 4406 | Film and the Humanities |
| HUM 4450 | Cultural Heritages and Changes[1] |
| HUM 4906 | Independent Study[1] |
| HUM 4491 | Cultural Heritages and Changes[1] |
| HUM 4543 | Literature and Philosophy |
| HUM 4544 | Literature and the Humanities |
| HUM 4561 | Ethics and the Humanities |
| HUM 4555 | Symbols and Myths |

[1]With a change in theme and the instructor's permission, these courses may be repeated for credit.

a. General Electives (30 semester hours): These courses may be outside of the Humanities and its contributing disciplines. Courses must be approved by the Program Director.

b. Language Requirement: Students must demonstrate a reading knowledge of a classical or modern language other than their native tongue equivalent to the end of the second semester of intensive beginning language instruction. This requirement may be satisfied by completing ten hours of language instruction or by passing a competency examination administered by the Department of Modern Languages.

### Classics Track

a. Humanities Core Curriculum 12

b. Three additional courses dealing with Classical (Greek or Roman) culture and civilization. These courses may be discipline courses of the contributing department 9

c. Three interdisciplinary Humanities (HUM) courses 9

d. Language requirement: The language requirement is the same as for other Humanities majors; however, students in the Classics Track are strongly encouraged to satisfy the requirement with a Classical language

e. General Electives (30 semester hours). These courses may be outside of the Humanities and its contributing disciplines. Courses must be approved by the Program Director 30

## Minor in the Humanities

1. One of the following:

| | |
|---|---|
| HUM 3214 | Ancient Classical Culture and Civilization |
| | or |
| HUM 4431 | The Greek World |
| | or |
| HUM 3432 | The Roman World |

2. Four additional HUM courses 12

### Electives

Four other Humanities courses, including the Classical languages, not crosslisted with courses used to satisfy requirements of the student's major.

## Course Descriptions

### Definition of Prefixes

HUM-Humanities

**GRE 1120 Classical Greek I (5).** Emphasis of grammar, and on basic reading and writing skills.

**GRE 1121 Classical Greek II (5).** Emphasis on grammar, and on basic reading and writing skills. Prerequisite: GRE 1120.

**GRE 3200 Intermediate Classical Greek (5).** Emphasis on grammar, and on acquiring intermediate reading and writing skills. Prerequisite: GRE 1121.

**GRW 3210 Greek Prose Writers (3).** Translation into English and grammatical analysis of selected texts of Classical prose writers, such as Plato, Aristotle, Xenophon, Thucydides and Plutarch. Prerequisite: Reading knowledge of Classical Greek or GRE 3200.

**HUM 3214 Ancient Classical Culture and Civilization (3).** Explores the culture of the ancient Greek and Latin worlds from an interdisciplinary perspective and studies the varied conceptions of the individual, society, and nature.

**HUM 3244 Renaissance and Baroque Cultures (3).** An in-depth examination of the cultural monuments of the Renaissance, Reformation, Counter-Reformation, and Baroque periods and of the forces that helped shape them.

**HUM 3246 The Enlightenment and the Modern World (3).** Explores the culture and the Enlightenment and the modern world from an interdisciplinary perspective and studies the varying conceptions of the individual society and nature.

**HUM 3304 Values in Conflict (3).** Philosophical, ethical, and religious foundations of Western civilization and significant challenges its value system has received from critical and revolutionary thought.

**HUM 3306 History of Ideas (3).** The historical development of fundamental concepts through an interdisciplinary cultural approach. Nature, freedom, beauty, virtue, alienation, and relativism are traced in literature, art, and philosophy including the social context of developing ideas.

**HUM 3325 Women, Culture and History (3).** Examines women's lives within various world cultures and historical periods. Examines the cultural meaning attributed to women, women's lived experiences and historical contributions.

**HUM 3432 The Roman World (3).** An in-depth examination of selected cultural monuments and events of the Roman Republic and Empire and of the forces that helped shape them.

**HUM 3435 The Medieval World (3).** An in-depth examination of cultural monuments of the European Middle Ages and of the forces that helped shape them.

**HUM 3512 Art and Society (3).** A study of the relationship between art and culture in different periods, including patronage, the role of the artist, and the relationship between art and economic, political, religious, and ideological forces.

**HUM 3545 Art and Literature (3).** A study of a period in the history of visual art as it relates to literature. Topics may include art and mythology, sacred and profane love in art and literature, painting and poetry, and the novel and art.

**HUM 3930 Female/Male: Women's Studies Seminar (3).** This course interprets and contrasts the status of women and men in context with women's inequality. Diverse topics include the workplace, family, education, image, violence and ethnicity.

**HUM 3949 Cooperative Education in Humanities (3).** A student majoring in Humanities may spend one or two semesters fully employed in industry in a capacity relating to the major.

**HUM 4391 4542 Human Concerns (3).** Examines concerns important to the human condition, including varying conceptions of human nature, the relation of the individual to society, the quest for identity, the search for meaning through literature, art and social institutions. (With consent of the instructor, this course may be repeated for credit).

**HUM 4406 Film and the Humanities (3).** Studies the significance of film in Western culture: the language, semiotics and technique of films with the aid of appropriate cinematographical material.

**HUM 4431 The Greek World (3).** An in-depth examination of selected cultural monuments and events of the Greek World in the Classical and Hellenistic periods and of the forces that helped shape them.

**HUM 4450 , 4491 Cultural Heritages and Cultural Changes (3).** Focuses upon various cultures and their development, including such topics as: cultural evolution and revolution, ethnicity and pluralism, and subcultures and countercultures. (With consent of the instructor, this course may be repeated for credit.)

**HUM 4543 Literature and Philosophy (3).** The interpretation of literature and philosophy from an interdisciplinary perspective. In addition to philosophical novels, poetry, and drama, the course may examine philosophical scrutiny of literature.

**HUM 4544 Literature and the Humanities (3).** Literature from an interdisciplinary perspective. Literary texts are related to the cultural context of their production and the ideas surrounding them.

**HUM 4555 Symbols and Myths (3).** An in-depth examination of mythology and symbolic language within the cultural and psychodynamic forces that inform them. This course gives special emphasis to Classical myths.

**HUM 4561 Ethics and the Humanities (3).** Human values studied from an interdisciplinary perspective. Selected ethical issues are examined using philosophical, historical, or literary texts. The relationship between ethical values and cultural achievements is explored.

**HUM 4701 Study Abroad in the Humanities (1-9).** Integrated study of painting, architecture, music, drama, dance, and philosophy. Attitudes and beliefs of societies as they are reflected in the arts.

**HUM 4920 Humanities Interdisciplinary Colloquium (3).** Addresses a specific topic in-depth from a variety of perspectives. Topics will be announced in advance. (With consent of the instructor, this course may be repeated for credit.)

**LAT 1120 Latin I (5).** Emphasis on grammar and on acquiring basic reading and writing skills.

**LAT 1121 Latin II (5).** Emphasis on grammar and on acquiring reading and writing skills. Prerequisite: LAT 1120.

**LAT 2200 Intermediate Latin (5).** Emphasis on grammar and on acquiring basic reading and writing skills. Prerequisite: LAT 1121.

**LAT 3210 Latin Prose Writers (3).** Translation into English and grammatical analysis of selected texts of classical prose writers such as Cicero, Caesar and Livy. Prerequisite: Reading knowledge of Latin or LAT 2200.

## International Relations

**Ralph S. Clem,** *Professor and Chairperson*
**Ken I. Boodhoo,** *Associate Professor*
**Thomas A. Breslin,** *Associate Professor*
**Peter R. Craumer,** *Assistant Professor*
**Nancy E. Erwin,** *Assistant Professor*
**Damian J. Fernandez,** *Assistant Professor*
**Farrokh Jhabvala,** *Professor*
**Antonio Jorge,** *Professor*
**Charles G. MacDonald,** *Professor*
**Mohiaddin Mesbahi,** *Assistant Professor*
**Susan Waltz,** *Associate Professor*
**Gregory B. Wolfe,** *Professor*

### Bachelor of Arts

#### Lower Division Preparation

To qualify for admission to the program, FIU undergraduates must have met all the lower division requirements including CLAST, completed 60 semester hours, and must be otherwise acceptable into the program.

#### Recommended Courses

Economics, foreign languages, geography, history, international relations, introduction to statistics, political science, sociology.

#### Upper Division Program

International Relations majors must complete 30 semester hours of coursework in the department with a grade of 'C' or better.

**Core Requirement:** 12 semester hours

| | | |
|---|---|---|
| GEA 3000 | World Regional Geography | 3 |
| INR 3003 | Foundations of International Relations | 3 |
| | or | |
| INR 2001 | Introduction to International Relations (with the approval of an advisor) | |
| INR 3013 | Development of International Relations Thought | 3 |
| INR 4603 | Theories of International Relations | 3 |

**Breadth Requirements:** 18 semester hours

At least one course in each of the following:

Area studies (regional courses on Europe, the Caribbean, Latin America, Africa, Asia, or the Soviet Union) **(AS)**
Population Studies or Geography **(PG)**
International Law or Organization **(IL)**
Issues and Problems in International Relations **(IP)**

#### Electives

Courses are designed to meet particular professional goals. The student is encouraged to consider a dual major in related fields; to pursue courses in foreign languages and methodology; and to work toward appropriate academic certificates (e.g., Latin American and Caribbean Studies).

### Minor in Geography

A student majoring in another academic discipline earns a Minor in Geography by successfully completing approved coursework of 15 semester hours as described below:

| | | |
|---|---|---|
| GEO 3000 | Introduction to Geography | 3 |
| GEA 3000 | World Regional Geography | 3 |

In addition to the above required courses, students must take a minimum of three other Geography courses, at least one with a GEA prefix, and at least with a GEO prefix.

### Minor in International Relations

A student majoring in another academic discipline earns a Minor in International Relations by successfully completing approved coursework of 15 semester hours in the Department of International Relations. This program must includeb:

| | | |
|---|---|---|
| INR 3003 | Foundations of International Relations | 3 |
| | or | |
| INR 2001 | Introduction to International Relations (with the approval of an advisor) | |
| GEA 3000 | World Regional Geography | 3 |
| | or | |

An approved course in Geography

A course in International Law or Organization

Two electives in International Relations

#### Dual Major and Certificates

Students are encouraged to pursue a dual major or a certificate program to complement the International Relations program. This allows the student to add an important dimension to the major.

## Course Descriptions

#### Definition of Prefixes

CPO-Comparative Politics; GEA-Geography-Regional (Area); GEO-Geography-Systemic; HFT-Hospitality, Food, Tourism; INR-International Relations;

POS- Political Science; PUP-Public Policy.

**GEA 3000 World Regional Geography (3).** A systematic survey of the major regions and countries of the world, with regard to their physical, cultural, and political characteristics. Emphasis upon climate, natural resources, economic development, and population patterns.

**GEA 3320 Population and Geography of the Caribbean (PG) (3).** Physical, cultural and political geography of the Caribbean; emphasis on population patterns, growth and ethnicity.

**GEA 3400 Population and Geography of Latin America (PG) (3).** Introduction to the physical, cultural, and political geography of Latin America. Emphasis on population patterns and problems of population growth, systems of land use and tenure, economic development, natural resources, and agriculture.

**GEA 3500 Population and Geography of Europe (PG) (3).** Introduction to the physical, cultural, and political geography of Europe emphasizing the evolution of the states and the geographical factors facilitating the integration movement.

**GEA 3554 Population and Geography of the Soviet Union (PG) (3).** An analysis of the U.S.S.R. in terms of its resources; economic development; and aspects of population change such as migration, urbanization, and nationality groups.

**GEA 3630 Population and Geography of the Middle East (PG) (3).** Introduction to the physical, cultural, and political geography of the Middle East. Emphasis on population patterns, natural resources, and economic development.

**GEA 4905 Independent Study (1-6).** Directed independent research in regional geography. Requires prior approval by instructor.

**GEO 3000 Introduction to Geography (3).** Leading concepts of human and environmental geography. Physical, cultural, economic and political factors in the spatial patterns of natural and human systems.

**GEO 3471 Political Geography (PG) (3).** Emphasis is given to man's organization of space, particularly as it pertains to the nation-state. Factors instrumental to determining the viability of states are included stressing unifying-repelling forces.

**GEO 3602 Urban Geography (PG) (3).** The study of spatial organization within and among urban settlements. Analysis of both the empirical and theoretical aspects of urbanism are covered, with an emphasis on current urban problems.

**GEO 4905 Independent Study (1-6).** Directed independent research in systematic geography. Requires prior approval by instructor.

**GEO 5415 Topics in Social Geography (PG, IP) (3).** Topics discussed include geographic aspects of population and ethnicity, with emphasis on sources and analysis of data and pertinent concepts. Prerequisite: GEA 3000 or permission of instructor.

**HFT 3700 Tourism and International Affairs (IP) (3).** An introduction to basic elements of international tourism; an inquiry into the transnational influence of tourism as affected by its institutional organization, by the leisure traveler, and by the host national; and a review of opportunities for policy-making by the group, the State, and international and global agencies.

**INR 2001 Introduction to International Relations (3).** Introduction to the interactions among international actors: states, international organizations, and transnational groups. Concepts such as power and national interest will be introduced.

**INR 3003 Foundations of International Relations (3).** An examination of international political, economic, and social systems. Emphasis is placed on basic approaches to the study of international relations.

**INR 3004 Patterns of International Relations (IP) (3).** The course deals with the development and practice of key concepts of international relations as seen in the historical perspective of the 19th and 20th centuries. The course is structured so as to emphasize the continuity and coexistence of the several concepts during the 20th century, and to provide an outline of modern diplomatic history.

**INR 3013 Development of International Relations Thought (3).** The nature and characteristics of international relations from antiquity to the end of the First World War. Examination of the religio-philosophical, socio-economic and political ideas and systems associated with them. Study of select historical occurrences and patterns of social change and their interaction with the dynamics of international relations. Prerequisite: INR 3003.

**INR 3043 Population and Society (IP) (3).** Introduction to basic demographic concepts: fertility, mortality, migration, urbanization. Discussion of economic development, modernization and population change. Examination of sources of data and background information including censuses and vital statistics, and their utilization.

**INR 3081 Issues and Problems in International Relations (IP) (3).** Examines selected world and regional issues and problems. Topics vary according to the instructor.

**INR 3214 International Relations of Europe (AS) (3).** An examination of the international, social, economic, and political life of contemporary Europe. Emphasis given to international organizations and the trend toward economic and political integration.

**INR 3232 International Relations of China (AS) (3).** An examination of the development of China's international relations in the 20th century. Special attention to the development of institutional mechanisms for diplomacy and to problems of integrating domestic and foreign policies.

**INR 3245 International Relations of Latin America (AS) (3).** An examination of international, social, economic, and political life of Latin America. Emphasis given to the role of international organizations; regionalism; and the trend toward economic integration.

**INR 3246 International Relations of the Caribbean (AS) (3).** An examination of the international social, economic, and political life of the Caribbean. Includes English, Spanish, and French speaking regions.

**INR 3253 International Relations of Sub-Saharan Africa (AS) (3).** An examination of contemporary social, economic, and political life in sub-Saharan Africa in view of historical experiences. Special attention given to regional conflicts and apartheid.

**INR 3262 Soviet Foreign Policy (AS) (3).** Description and analysis of Soviet Foreign Policy in light of ideology and national security. Specific cases and current issues will be discussed, especially those involving Soviet-American and Sino-Soviet Relations.

**INR 3274 International Relations of the Middle East (AS) (3).** An examination of the international social, economic, and political life of the Middle East. The role of oil in the region will receive special attention.

**INR 3403 International Law (IL) (3).** Introduction to the legal concepts, framework, and institutions which play a role

in international relations theory and practice.

**INR 3502 International Organizations (IL, IP) (3).** The study of international political, economic, and social organizations and their impact upon the relations between nations. Emphasis on the constitution, voting, membership, security and operation of such organizations, and the settling of international disputes through these bodies.

**INR 3949 Cooperative Education in Social Sciences (3).** A student majoring in one of the Social Sciences (Economics, International Relations, Political Science, Sociology, or Psychology) may spend several semesters fully employed in industry or government in a capacity relating to the major. Prerequisite: Permission of Cooperative Education Program and major department.

**INR 4024 Ethnicity and Nationality: World Patterns and Problems (IP) (3).** A systematic survey of multinational states and their current political and socio-economic situations. The concept of ethnicity and its correlates. Conceptual bases of ethnic integration, assimilation, and stratification. The macro and micro-scales; country, region, city, neighborhood. The consequences of modernization and economic development.

**INR 4044 World Population Problems (IP) (3).** Analysis of problems of population growth, economic development, and food supply. The impact of population growth upon the world political system. The Green Revolution and its implications. Environmental consequences of population growth. Prerequisite: INR 3043.

**INR 4054 World Resources and World Order (IP) (3).** An examination of the impact of the quantity and distribution of the world's resources upon the relations between nations. The availability of mineral resources and food, in particular, will receive attention; and an assessment will be made of the international economic and political implications deriving therefrom.

**INR 4247 Caribbean Regional Relations (AS) (3).** An examination of the forces and institutions which contribute to or inhibit cooperation and integration in the Caribbean. Prerequisites: INR 3246, CPO 3323, ECS 4432, or ECS 4433.

**INR 4283 International Relations, Development, and the Third World (AS, IP) (3).** An examination of the impact of the theory and practice of development and the relations between nations, with particular emphasis on the Third World. Attention given to the role of international political and economic organizations in the development process.

**INR 4335 Strategic Studies and National Security (IP) (3).** The role of force in international relations is examined. The use and control of force in theory and practice is analyzed. Special attention is paid to contemporary national security issues.

**INR 4404 International Protection of Human Rights (IL, IP) (3).** Development of the concern of the international community with the rights of individuals and groups and the institutional mechanisms which have been set up for their protection.

**INR 4408 Topics in International Law (IL, IP) (3).** An intensive examination of selected topics in international law and relations among nations. Topics will vary according to the interests of the instructor and the students.

**INR 4603 Theories of International Relations (3).** Analysis and conceptualization of the forces and conditions which influence relations among nations. Emphasis is on the provision of an analytical basis for the study of international relations. Prerequisite: INR 2001 or permission of instructor.

**INR 4905 Independent Study (VAR).** Directed independent research. Requires prior approval by instructor.

**INR 4931 Topics in International Relations (3).** Varies according to the instructor.

**INR 4949 Cooperative Education in Social Sciences (3).** A student majoring in one of the Social Sciences (Economics, International Relations, Political Science, Sociology, or Psychology) may spend one or two semesters fully employed in industry or government in a capacity relating to the major. Prerequisite: Permission of Cooperative Education Program and major department.

**INR 5087 Ethnicity and the Politics of Development (3).** This course examines the conceptual and substantive dimensions of ethnicity in the context of world politics and political development. The course will highlight ethnicity and ethnic groups as critical factors in North-South politics.

**INR 5607 International Relations and Development (3).** An analysis and conceptualization of the process of development as it takes place in the international context. Special attention given to the role of international organizations in promoting development and the manner in which differences in developmental levels conditions international relations.

**INR 5906 Independent Study (VAR).** Directed independent research. Requires prior approval by instructor.

**INR 5935 Topics in International Relations (3).** Varies according to the instructor.

**PUP 3206 International Law and the Environment (IL, IP) (3).** Introduction to the growing body of international laws on environmental issues, with special emphasis on important cases. Recent attempts to coordinate and regulate activities affecting the global environment, with particular attention to the UN Environmental Agency.

## School of Journalism and Mass Communication

**J. Arthur Heise,** *Professor and Director*
**Lillian Lodge Kopenhaver,** *Professor and Associate Director*
**William Adams,** *Associate Professor*
**Gerardo Bolanos,** *Deputy Executive Director, CAJP*
**James E. Couch,** *Associate Professor*
**Humberto Delgado,** *Assistant Professor*
**Charles Fair,** *Associate Professor*
**Alvin Goldstein,** *Associate Professor*
**Charles Green,** *Executive Director, Central American Journalism Project*
**Kevin Hall,** *Editor-in-Residence*
**David L. Martinson,** *Associate Professor*
**Debra Miller,** *Assistant Professor*
**Agatha Ogazon,** *Program Coordinator, CAJP*
**Patricia B. Rose,** *Associate Professor*
**Robert Ruttenberg,** *Associate Professor*
**Mel Stein,** *Creative Director-In-Residence*
**Lorna Veraldi,** *Assistant Professor*
**Jack Virtue,** *Associate Executive Director, CAJP*
**William F. Wright,** *Associate Professor*

### Bachelor of Science in Communication

The aim of the undergraduate communication program at the University is to prepare students who:

1. Are broadly educated, demonstrated by a grasp of the liberal arts and

an appreciation of the value of knowledge and learning, including exploration in some depth of a specific field of knowledge outside of communication;

2. Can think clearly and objectively about the complexities of the modern world, formulate concepts and effectively communicate this information to targeted audiences;

3. Are proficient in the basic skills necessary to meet professional requirements at the entry level in one of the sequences offered by the department. This shall include the ability to write English to professional standards and to master the mechanics of grammar, spelling, and punctuation; and

4. Understand the social, ethical, economic, philosophical, and political aspects of the communication profession in a global society.

The school offers sequences in advertising, broadcasting, public relations, and journalism. Approximately 25 percent of a student's course work is within the school. The purpose is to provide professional career entry skills as well as a broader understanding of communication processes and techniques and their impact on society.

Emphasis is placed on a broad range of knowledge. In keeping with the standards required of nationally-accredited mass communication programs for graduation, all students must take a minimum of 90 semester hours outside the field of journalism and mass communication; a minimum of 65 of those hours must be in the liberal arts.

Additionally, students will select an area of concentration outside the field of communication to pursue in depth. Each sequence advisor will provide recommendations for students with particular career goals.

Typing ability is required of all students.

## Lower Division Requirements

To qualify for admission to the program, FIU undergraduates must have met all the lower division requirements including CLAST, completed 60 semester hours, and must be otherwise acceptable into the program.

Transfer students from an accredited two-year college or another accredited institution are required to have completed 48 semester hours in the liberal arts area. Students are strongly encouraged to take more than 48 hours in the liberal arts at the lower division. All previous course work will be evaluated to ascertain that the applicant to the school has met the University's General Education requirements as well as those of the school and sequence. All deficiencies must be completed within the first two semesters. The student must have a minimum GPA of 2.0 in all previous course work.

### Admission Policy

All students are admitted to the school on a provisional basis. Continuation in the degree program is contingent upon successful completion of 12 semester hours of communication courses, with at least a 2.5 GPA. The 12 hours must include: MMC 3101, the introductory course to the chosen sequence, and two other three-hour courses in communication.

### Language Proficiency

All students are required to pass MMC 3101 with a grade of 'C' or higher before being admitted to official major status in the school. A diagnostic English test will be administered prior to the first class of MMC 3101. Students who do not pass the test will not be allowed to take the course. English courses for those not passing the MMC 3101 diagnostic test will be recommended. Students who do not pass the MMC 3101 class may not enroll in more than nine other semester hours in the school. A passing grade of 'C' or higher in MMC 3101 is required to enroll in ADV 4100, JOU 3100, RTV 3100, or PUR 4100.

### Transfer Credit

Transfer students entering the program may receive credit, with school approval, for a maximum of six semester hours of communication courses taken at another institution with a grade of 'B' or higher in each course. This does not include core course requirements, MMC 3101, MMC 4200, and MMC 4602.

### Lower Division Students

Freshmen and sophomores planning to enter the school are encouraged to write or visit the school to discuss requirements, career opportunities, and their programs of study.

### Acceptable Performance

Only grades of 'C' or higher in school courses, the student's area of concentration, and other courses required by the school shall apply for graduation. A 'C-' is unacceptable.

### Graduation Policy

To be eligible for graduation, a student must have a minimum 2.5 GPA in all courses required in the school for graduation.

## Core Course Requirements

In addition to sequence requirements, each student must enroll in the following courses.

| | | |
|---|---|---|
| MMC 3101 | Writing for Mass Communication | 3 |
| MMC 4200 | Mass Communication Law | 3 |
| MMC 4602 | Mass Media and Society | 3 |
| Total | | 9 |

## Advertising

### School Requirements:

Students in the Advertising sequence are required to take the following courses in addition to the nine semester hours of core courses.

### Required Courses

| | | |
|---|---|---|
| ADV 3000 | Principles of Advertising | 3 |
| ADV 3200 | Advertising Graphics and Production | 3 |
| ADV 3500 | Advertising Strategy Research | 3 |
| ADV 4100 | Advertising Copywriting | 3 |
| ADV 4300 | Media Planning | 3 |
| ADV 4930 | Advertising Seminar | 3 |
| ADV 4801 | Advertising Campaigns | 3 |
| RTV 3200 | TV Studio Production | |
| | or | |
| PUR 3000 | Principles of PR | 3 |

Before taking ADV 3000, students are strongly advised to take:

| | | |
|---|---|---|
| MAR 3023 | Marketing Management | 3 |

### Departmental Elective: (3)

Students must select one of the following courses:

| | |
|---|---|
| RTV 3000 | Principles of Broadcasting |
| RTV 3100 | Writing for Electronic Media |
| RTV 3200 | TV Studio Production |
| JOU 3100 | News Reporting |
| JOU 4208 | Magazine Editing and Production |
| PUR 3000 | Principles of Public Relations |
| MMC 4609 | Public Opinion and Mass Media |
| PUR 4101 | Publication Editing and Design |
| MMC 4945 | Communication Internship |

### Area of Concentration

In consultation with an advisor, students must elect a coherent series of five upper-division courses (15 semester hours) in a non-communication area related to their career emphasis.

### Liberal Arts Requirements

Students must earn a minimum of 65 semester hours in liberal arts, 12 of which must be upper division courses.

Lower division courses are recommended in visual arts, drama, foreign language, history, literature, music, philosophy, religion, speech, anthropology, economics, geography, international re-

lations, political science, sociology, and psychology.

Upper division courses outside of Liberal Arts are recommended in management or marketing. All subject areas in liberal arts may qualify, with the approval of the advertising advisor.

### Internship

Internships are available for advertising majors who have not yet gained experience in the field. Students who have a 3.0 GPA in school course work and who meet the curricular requirements outlined in the internship packet may elect an internship in consultation with their advisors. The internship requires a minimum of 300 hours of work.

### Courses Outside of the Field

A minimum of 90 semester hours must be taken outside the field of journalism and mass communication in order to graduate.

## Minor in Advertising

Students are required to take the following four courses:

| | | |
|---|---|---|
| MMC 3101 | Writing for Mass Media | 3 |
| MMC 4602 | Mass Media and Society | 3 |
| ADV 3000 | Principles of Advertising | 3 |
| ADV 3500 | Advertising Strategy Research | 3 |

And choose two courses from the following group for a total of 18 semester hours.

| | | |
|---|---|---|
| ADV 3200 | Advertising Graphics and Production | 3 |
| ADV 4100 | Advertising Copywriting | 3 |
| ADV 4300 | Media Planning | 3 |

## Journalism

Students may choose the Print Journalism Track (for newspaper, magazine, or wire service careers), or the Broadcast Journalism Track (for television and radio careers). Students are required to take the following courses in addition to the nine semester hours of core courses:

### Print Journalism

| | | |
|---|---|---|
| JOU 3003 | Principles of Journalism | 3 |
| JOU 3100 | News Reporting (Prerequisites: MMC 3101 and JOU 3003) | 3 |
| JOU 3101 | Advanced News Reporting | 3 |
| JOU 3200 | Editing and Makeup (Prerequisite: JOU 3100) | 3 |
| JOU 3300 | Feature Writing (Prerequisite: JOU 3100) | 3 |
| JOU 4108 | Public Affairs Reporting (Prerequisite: JOU 3101) | 3 |
| JOU 3312 | Specialty Journalism (Prerequisite: JOU 3100) | 1-1-1 |
| JOU 4004 | Perspectives in Mass Media (Prerequisite: Senior standing) | 3 |

### Broadcast Journalism

| | | |
|---|---|---|
| JOU 3003 | Principles of Journalism | 3 |
| JOU 3100 | News Reporting (Prerequisites: MMC 3101 and JOU 3003) | 3 |
| MMC 4945 | Internship | 3 |
| RTV 4302 | Broadcast News Reporting (Prerequisites: JOU 3100) | 3 |
| RTV 4466 | Electronic News Gathering (Prerequisite: RTV 4302) | 3 |
| JOU 4108 | Public Affairs Reporting (Prerequisite: JOU 3100) | 3 |
| JOU 3312 | Specialty Journalism (Prerequisite: JOU 3101) | 1-1-1 |
| JOU 4004 | Perspectives in Mass Media (Prerequisite: Senior standing) | 3 |

### Electives

Students must select one of the following courses:

| | | |
|---|---|---|
| JOU 4208 | Magazine Editing and Production | 3 |
| MMC 4500 | Media History | 3 |
| RTV 3000 | Principles of Broadcasting | 3 |
| ADV 3000 | Principles of Advertising | 3 |
| PUR 3000 | Principles of Public Relations | 3 |
| MMC 3250 | Media Management | 3 |
| MMC 4609 | Public Opinion and the Mass Media | 3 |
| MMC 4945 | Internship (for qualified seniors only) | 3 |

### Area of Concentration

In consultation with an advisor, students must develop a coherent series of 15 upper division hours in a field outside the school. Students are encouraged to select a field that will broaden their knowledge. These fields include English literature, history, philosophy, science, the humanities, and political science. Students may select a specialized area of concentration such as economics, criminal justice, international relations, or business, but are encouraged to supplement studies in these fields with liberal arts courses. Students are encouraged to take a course in logic.

### Liberal Arts Requirements

Students must earn a minimum of 65 semester hours in liberal arts.

In consultation with an advisor, students must select one upper division course from each of the following five areas: statistics, psychology, economics, political science, and sociology.

Students may take the remaining liberal arts courses in the lower or upper division. Courses in the following areas are recommended: English, philosophy, history, political science, and modern languages.

### Internship

The internship is important for journalism majors who have not yet gained experience in the field. Therefore, students who have a 3.0 GPA in school course work and meet the curricular requirements outlined in the internship packet may select the internship in consultation with their advisors. The internship program requires a minimum of 300 hours of work.

### Courses Outside of the Field

A minimum of 90 semester hours must be taken outside the field of journalism and mass communication in order to graduate.

## Minor in Journalism

The minor programs require 16 semester hours each.

### Print Journalism

Required Courses

| | | |
|---|---|---|
| MMC 3101 | Writing for Mass Communication | 3 |
| JOU 3100 | News Reporting | 3 |
| JOU 3101 | Advanced News Reporting | 3 |
| | or | |
| JOU 3300 | Feature Writing | 3 |
| JOU 3200 | Editing and Make-up | 3 |
| | or | |
| JOU 4108 | Public Affairs Reporting | 3 |
| JOU 3312 | Specialty Journalism | 1 |
| JOU 4004 | Perspectives in Mass Media | 3 |

### Broadcast Journalism

Required Courses

| | | |
|---|---|---|
| MMC 3101 | Writing for Mass Communication | 3 |
| JOU 3100 | News Reporting | 3 |
| JOU 3312 | Specialty Journalism | 1 |
| JOU 4004 | Perspectives in Mass Media | 3 |
| JOU 4466 | Electronic News Gathering | 3 |
| RTV 4302 | Broadcast News Reporting | 3 |

## Public Relations

Students in the Public Relations sequence are required to take the following courses in addition to the nine semester hours of core courses:

| | | |
|---|---|---|
| PUR 3000 | Principles of Public Relations | 3 |
| PUR 4100 | Writing for Public Relations | 3 |
| PUR 4101 | Publications Editing and Design | 3 |
| PUR 4106 | Advanced PR Writing | 3 |
| PUR 4800 | Public Relations Campaigns | 3 |
| PUR 4934 | Public Relations Seminar | 3 |
| MMC 4420 | Mass Communication Research Techniques | 3 |
| MMC 4609 | Public Opinion and the Mass Media | 3 |

**Electives**

Students must select one of the following courses:

| | | |
|---|---|---|
| ADV 3000 | Principles of Advertising | 3 |
| JOU 4208 | Magazine Editing and Production | 3 |
| MMC 4945 | Internship | 3 |

**Area of Concentration**

In consultation with an advisor, the student must take 15 upper division semester hours in one area of emphasis outside of the school. These courses should relate to the student's career expectations. Several traditional areas of specialization are as follows:

Governmental public communication (public administration, international relations, criminal justice, or political science)

Corporate public relations (marketing or management)

Non-profit public relations (social sciences or marketing)

Public relations for travel and tourism (hospitality management)

These groupings do not preclude other specialized areas of interest, including modern languages and the certificate programs available in the College of Arts and Sciences.

**Liberal Arts Requirements**

Students must earn a minimum of 65 semester hours in liberal arts, 12 of which must be upper division courses.

Students must select one course from each of the following subject areas: American or English literature, economics, political science and psychology.

Students may take the remaining liberal arts courses in the lower or upper division. Courses in the following subject areas are strongly recommended: English, psychology, sociology, international relations, and modern languages.

**Internship**

The internship is important for public relations majors who have not yet gained experience in the field. Therefore, students who have a 3.0 GPA in school course work and meet the curricular requirements outlined in the internship packet may select an internship in consultation with their advisors. This three-semester hour course is one of the school electives. The internship program requires a minimum of 300 hours of work.

**Courses Outside of the Field**

A minimum of 90 semester hours must be taken outside the field of journalism and mass communication in order to graduate.

### Minor in Public Relations

The minor program requires 18 semester hours.

Required Courses

| | | |
|---|---|---|
| MMC 3101 | Writing for Mass Communication | 3 |
| PUR 3000 | Principles of Public Relations | 3 |
| PUR 4100 | Writing for Public Relations | 3 |
| PUR 4106 | Advanced PR Writing | 3 |
| JOU 4208 | Magazine Editing and Production | 3 |
| | or | |
| PUR 4101 | Publications Editing and Design | 3 |
| PUR 4800 | Public Relations Campaigns | 3 |

### Broadcasting

**School Requirements**

Students in the Broadcasting sequence may choose the Production Track or the Management Track.

Students are required to take the following courses in addition to the nine semester hours of core courses:

**Production**

| | | |
|---|---|---|
| RTV 3000 | Principles of Broadcasting | 3 |
| RTV 3100 | Writing for Electronic Media | 3 |
| RTV 3201 | Video Field Production (Co or prerequisite: RTV 3000) | 3 |
| RTV 3200 | Video Studio Production (Co or prerequisite: RTV 3000) | 3 |
| RTV 3263 | Video Post Production (Prerequisite: RTV 3201) | 3 |
| RTV 3207 | Video Directing (Prerequisite: RTV 3200) | 3 |
| RTV 3500 | Programming Theory (Prerequisite: RTV 3000) | 3 |
| RTV 4206 | Advanced Video Production Workshop | 3 |
| MMC 4262 | New Technologies | 3 |
| MMC 4945 | Communication Internship (For Eligible Students - Co or prerequisite: RTV 4206. Students not eligible for MMC 4945 must to take MMC 4420.) | 3 |
| | or | |
| MMC 4420 | Mass Communication Research Techniques | 3 |

**Management**

| | | |
|---|---|---|
| RTV 3000 | Principles of Broadcasting | 3 |
| RTV 3100 | Writing for Electronic Media | 3 |
| RTV 3500 | Telecommunication Programming Theory (Prerequisite: RTV 3000) | 3 |
| MMC 3250 | Media Management (Co or prerequisite: RTV 3000) | 3 |
| MMC 4262 | New Technologies | 3 |
| MMC 4302 | Comparative Systems (Prerequisite: RTV 3000) | 3 |
| MMC 4420 | Mass Communication Research Techniques | 3 |
| RTV 3201 | Video Field Production (Co or prerequisite: RTV 3000) | 3 |
| | or | |
| RTV 3200 | Video Studio Production (Co or prerequisite: RTV 3000) | 3 |
| MMC 4613 | Effects of Mass Media | 3 |
| | or | |
| MMC 4609 | Public Opinion and the Mass Media | 3 |

**Area of Concentration**

Students must take 15 upper division semester hours in a field outside of the school. This field of study will be decided upon with the advisor, with appropriate consideration given to the student's specialized needs.

**Liberal Arts Requirements**

Students must earn a minimum of 65 semester hours in liberal arts, of which 12 must be upper division semester hours.

a. Upper Division Courses

Students must select a total of 12 semester hours in the following subject areas: art (photography), art history, computer science, English, history, political science, philosophy, sociology or anthropology.

b. Lower Division Courses

Students may take the remaining liberal arts courses in the lower division, although only 10 semester hours of lower division at FIU are allowed for students

who transfer 60 lower division hours from other institutions.

### Internship

The internship is important for telecommunication majors who have not yet gained experience in the field. Therefore, students who have a 3.0 GPA in school course work and meet the curricular requirements outlined in the internship packet may select the internship in consultation with their advisor. The internship requires a minimum of 300 hours of work.

### Courses Outside of the Field

A minimum of 90 semester hours must be taken outside the field of journalism and mass communication in order to graduate.

## Minor in Broadcasting

**Required Courses:** (15 semester hours)

| | | |
|---|---|---|
| MMC 4602 | Mass Media and Society | 3 |
| RTV 3000 | Principles of Broadcasting | 3 |
| RTV 3100 | Writing for the Mass Media | 3 |
| RTV 3200 | Video Studio Production (Co or prerequisite: RTV 3000) | 3 |
| RTV 3500 | Telecommunication Programming Theory (Prerequisite: RTV 3000) | 3 |
| | or | |
| MMC 3250 | Media Management (Co or prerequisite: RTV 3000) | 3 |

## Minor in Mass Communication

Required Courses: (15 semester hours)

| | | |
|---|---|---|
| MMC 4602 | Mass Media and Society | 3 |
| MMC 4200 | Mass Media Law | 3 |
| MMC 4609 | Public Opinion and the Mass Media | 3 |
| PUR 3000 | Principles of Public Relations | 3 |
| | or | |
| ADV 3000 | Principles of Advertising | 3 |
| | or | |
| RTV 3000 | Principles of a Broadcasting | 3 |

### Elective Course

One three credit elective course at the 3000 level or higher in the school. (May include one of the two remaining courses above.)

## Certificate in Student Media Advising

Refer to certificate listing in the College of Arts and Sciences Certificate Programs section.

## Course Descriptions

### Definition of Prefixes

ADV-Advertising; FIL-Film; JOU-Journalism; MMC- Mass Media Communication; PGY-Photography; PUR-Public Relations; RTV-Radio-Television; VIC-Visual Communication.

**ADV 3000 Principles of Advertising (3).** Comprehensive survey of basic principles and practices of advertising emphasizing creative/media strategy decision processes and historical, social, economic, and social influences.

**ADV 3200 Advertising Graphics and Production (3).** Introduction to graphic design and print production. Emphasis on processes and terminology for advertising management. Lab exercises focusing on layout, art selection, type design/specification, printing and TV storyboards.

**ADV 3500 Advertising Strategy Research (3).** Nature and application of research utilized in advertising. Emphasis on gathering and analyzing primary and secondary data to determine situation analyses and advertising strategies.

**ADV 4100 Advertising Copywriting (3).** Introduction to copywriting for print and broadcast advertising. Emphasis on message construction relative to strategy, style, form, and format. Prerequisite: ADV 3500, ADV 3200, and MMC 3103.

**ADV 4300 Media Planning (3).** Planning, execution, and control of advertising media programs. Emphasis on characteristics of the media, buying and selling processes, and methods and techniques used in campaign planning. Prerequisite: ADV 3500.

**ADV 4801 Advertising Campaigns (3).** Advanced course emphasizing all aspects in developing national and local campaigns. Extensive outside projects including research, creative/media strategy and tactics determination, budgeting, sales promotion, evaluation and presentation. Prerequisites: ADV 3500, ADV 3200, ADV 4100, and ADV 4300.

**ADV 4930 Advertising Seminar (3).** A variable topics seminar dealing with one selected area of advertising, such as international advertising, media sales, advertising in the service sector. Prerequisites: ADV 3200, ADV 3500, ADV 4100, and ADV 4300.

**JOU 3003 Principles of Journalism (3).** What reporters and editors do and what they think about when they do it: the nature of news and the ethical, legal, social, technical and business questions of finding and presenting it to the public.

**JOU 3100 News Reporting (3).** To teach the skills necessary to recognize and produce a good news story. Experience with news values/judgments, AP style, news lead construction, news writing formats, and news-gathering, including working with sources. Prerequisites: JOU 3003 and MMC 3101.

**JOU 3101 Advanced News Reporting (3).** Controlled field reporting providing experience in source development, interviewing, writing under deadline pressure, and regular critique of student works. Prerequisite: JOU 3100.

**JOU 3200 Editing and Makeup (3).** Editing news copy for accuracy, brevity, and clarity, including practice with AP style, copy and proofreading marks. Learning the role and function of the news editor. Design and layout of newspaper pages, including working with art, photographs and headlines, and editing and fitting news copy. Prerequisite: JOU 3100.

**JOU 3300 Feature Writing (3).** Writing the feature story: human interest, trends, personality profiles, sidebars, backgrounders, color. Prerequisites: JOU 3100.

**JOU 3312 Specialty Journalism (1).** Seminars in such topics as investigative, political, business, sports, or minority reporting, and editorials and commentary. Must be taken three times. Prerequisite: JOU 3003.

**JOU 4004 Perspectives in Mass Media (3).** Examination of contemporary issues in journalism, including legal, moral, and ethical questions and the impact of news on society. Prerequisite: Must be taken in the senior year.

**JOU 4108 Public Affairs Reporting (3).** Actual reporting of area governments and civic affairs. Enhancement of interviewing techniques, investigative skills; includes seminars with politicians, government officials, civic leaders, specialty reporters. Prerequisites: JOU 3101 (for print majors); RTV 4302 (for broadcast majors).

**JOU 4208 Magazine Editing and Production (3).** Develops skill in writing, editing and design, and a knowledge of planning, typography and graphics. Attention is given to developing formats, selecting copy, photos, graphics, and type.

**JOU 5806 Student Publications Supervision (3).** Designed to assist teachers and advisers of journalism at the

high school and junior college level, this course emphasizes the technical aspects of producing student newspapers, yearbooks, and magazines, as well as the legal and ethical considerations facing today's adviser. In addition, attention is given to matters pertaining to curriculum and methodology for effective journalistic instruction.

**MMC 3101 Writing for Mass Communication (3).** Instruction and practice in the techniques used by reporters, ad copywriters and public relations writers to produce clear prose that informs, persuades and entertains, with exercises aimed at improving writing abilities.

**MMC 3250 Media Management (3).** Reviews the organization of radio, TV, magazine, and newspaper enterprises. Pre- or Corequisite: RTV 3000.

**MMC 4200 Mass Communication Law (3).** Study of laws that regulate U.S. mass media, interpretations of these laws through recent court decisions, and discussion of the way communicators work within the statutes of their nation and state.

**MMC 4253 Advanced Media Management (3).** A senior level course dealing with case studies of media organizations. Prerequisite: MMC 3250.

**MMC 4262 New Technologies of Communication (3).** The principal emphasis is upon new technologies and their utilization by non-profit organizations. Of particular interest are cable television, teletext, satellites, videodisc, and telecommunication trade.

**MMC 4302 Comparative Systems of Mass Communication (3).** An examination of various national and international mass communication systems and the elements which determine the type of systems currently operating throughout the world. Prerequisite: RTV 3000.

**MMC 4420 Research in the Mass Media (3).** Organize, authenticate, evaluate, analyze and interpret quantitative information for use in mass media activities. Instruction requires the use of a computer. Prerequisites: Senior standing.

**MMC 4500 Media History (3).** Development of American media from beginnings in Europe to present day; freedom of the press and its relationships to economic, political, and social trends in society.

**MMC 4602 Role of Mass Media in Society (3).** Investigation of the role played in the U.S. by the mass communication media as a cultural, social, informational, economic, political, and educational force. The interrelationship of all media and their potential impact on the collective population will be studied.

**MMC 4609 Public Opinion and the Mass Media (3).** Study of the communication process, persuasion, and attitude change. Explores the methods of measuring, analyzing, changing, and/or maintaining the public opinion for socially acceptable causes.

**MMC 4613 Effects of the Mass Media (3).** Reviews the effects of the media, with special attention to children, minorities, terrorism, and Third World countries.

**MMC 4905 Independent Study (1-3).** Specialized intensive study in an area of special interest to the student. Consent of instructor is required. (Limit of three credits).

**MMC 4936 Special Topics (VAR).** Intensive study for groups of students of a particular topic or limited number of topics, not otherwise offered in the curriculum. Consent of instructor or school chairperson is required.

**MMC 4940 Media Practicum (3).** Structured field-work experience in media environment.

**MMC 4945 Communication Internship (3).** On-the-job learning in activity at selected and approved organizations. Will include newspapers, magazines, radio and TV stations, agencies, and nonprofit organizations. Prerequisite: Consent of advisor and RTV 4206.

**MMC 5207 Ethical and Legal Foundations of the Student Press (3).** Examines ethical and legal foundations underlying the operation of the student press on American campuses, stressing both rights and responsibilities and how to organize publications to protect both.

**MMC 5445 Applied Research Methods in the Mass Media (3).** An advanced course in the design, execution, and utilization of research studies by media practitioners with special emphasis on original proprietary studies.

**MMC 5661 Minorities and the Mass Media (3).** A critical review of the role of the mass media as it relates to ethnic, religious, and social minorities in a pluralistic society.

**MMC 5932 Special Topics Seminar (3).** A variable topic seminar dealing with issues of interest to the community. Examples are rights of high school journalists, cable TV, the use of mini-computers in creative communication.

**PUR 3000 Principles of Public Relations (3).** An introduction to the theory, history, practice, and future of public relations. A comprehensive study of the field.

**PUR 4100 Writing for Public Relations (3).** Practice in the preparation and production of press releases, public service announcements, media memos and teases, backgrounders and proposals, letters, and brochure and newsletter copy. Prerequisites: PUR 3000 and MMC 3101.

**PUR 4101 Publications Editing and Design (3).** Design, editing, and production of materials in the area of trade, corporate, organizational, and technical press, with special attention given to typography, style and production of tabloid and magazine format publications. Prerequisite: PUR 3000, PUR 4100, PUR 4106 or consent of instructor.

**PUR 4106 Advanced PR Writing (3).** Development of skills related to the writing of materials for special events, feature topics, multimedia presentations and ghostwriting of speeches. Prerequisite: PUR 4100, MMC 3101, PUR 3000.

**PUR 4800 Public Relations Campaigns (3).** An advanced course in application of theory to actual implementation of public relations activities, including preparing press kits, press releases, special events, brochures, and multimedia presentations. Prerequisite: PUR 3000, PUR 4106 or consent of instructor.

**PUR 4934 Public Relations Seminar (3).** Open to public relations-emphasis students only. A course designed to allow the advanced public relations student to pursue a specially selected, specific area of public relations (i.e., political, medical, financial, government, corporate, educational, etc.) through in-depth study under a tutorial style of instruction and guidance. Prerequisites: PUR 3000 and PUR 4800, or consent of instructor.

**PUR 5406 Multi-Cultural Communications (3).** Explores the multi-cultural dimensions of communications with diverse audiences in the United States and abroad. Prerequisite: PUR 3000, PUR 4800 or permission of instructor.

**PUR 5607 Public Relations Management (3).** Operations and objectives of organized public relations activities and programs. The role of management in corporate and agency public relations and policy formulation in the public process. Prerequisite: PUR 3000 and PUR

4100 and PUR 4800 or permission of instructor.

**PUR 5806 Public Relations Strategy, Planning and Evaluation (3).** Advanced study in evaluating public relations effectiveness, measurement and interpretation of public attitudes, and development of campaign strategies. Prerequisite: PUR 3000 and PUR 4800 or permission of instructor.

**RTV 3000 Principles of Broadcasting (3).** Review of broadcasting industries, organization, history, and practices.

**RTV 3100 Writing for the Electronic Media (3).** Emphasis placed on writing for broadcast and full program script preparation. Prerequisite: MMC 3101.

**RTV 3200 Video Studio Production (3).** Use of television studio equipment and techniques in production of programs, newcasts, documentaries, commercials, training and video productions. Introduction to basic video directing. Pre- or corequisite: RTV 3000.

**RTV 3201 Video Field Production (3).** Use of ENG/EFP equipment and techniques in production of programs, news, documentaries, music videos, commercials, training and video productions on location, including basic PP techniques. Emphasis on single camera techniques.

**RTV 3207 Video Directing (3).** Studio directing/technical directing and related techniques used in television entertainment shows, commercials, newscasts, documentaries, training and corporate video productions. Students are expected to solve media-related problems during actual productions. Prerequisite: RTV 3200.

**RTV 3263 Video Post Production (3).** Advanced post production techniques using A & B rolls, complex audio mixes and their preparation and execution. Prerequisite: RTV 3201.

**RTV 3500 Telecommunication Programming Theory (3).** Introductory course in programming, ratings, and audience analysis. Prerequisite: RTV 3000.

**RTV 4206 Advanced Video Production Technique Workshop (3).** Advanced course in field video production technique. Emphasis is to develop greater location video skills in narrative construction, including more complex narrative structures, more complex video and audio editing, field camera and sound-recording techniques. Hands-on course.

**RTV 4302 Broadcast News Reporting (3).** Reporting, writing, and presenting radio and television news programs; analysis of news and public affairs broadcasting; social responsibility for broadcasters. Prerequisite: JOU 3100.

**RTV 4466 Electronic News Gathering (3).** Use of ENG in broadcast journalism. Prerequisites: RTV 4302.

**RTV 5806 Telecommunication Management Structures (3).** Intensive study of telecommunication management problems, theory of same, solutions of same through practical application and examination of case studies. Prerequisite: Graduate standing.

**RTV 5935 Seminar in International Comparative Broadcasting Systems (3).** Introduction to international telecommunication systems with special emphasis on broadcasting. Comparison with other countries. Prerequisite: Graduate standing or permission of instructor.

**RTV 5936 Seminar in New Mass Communication Technologies (3).** Discussion of new communication technologies and their influence on the society. Prerequisite: Graduate standing.

**VIC 5205 Trends in Graphics and Design (3).** Design principles and how they relate to trends in student and professional media, including newspapers, magazines and yearbooks. Deals with graphics, packaging, typography and modern design.

## Liberal Studies

**Janat F. Parker,** *Associate Professor, Psychology, and Director of Liberal Studies*

The Liberal Studies Program exposes the student to a wide range of courses offered by the College, while granting the opportunity to pursue an individualized program of studies under the Liberal Studies guidelines. These guidelines include six categories of courses: (1) Foundations of Liberal Studies, two courses to be taken as early as possible; (2) Interdisciplinary Colloquia, two courses involving faculty from several departments of the College, and dealing with interdisciplinary topics; (3) Scientific Analysis, two courses to expose the student to the scientific method and its application to problems in biology, chemistry, environmental science, geology, and physics; (4) Humanistic Analysis, two courses dealing with the analysis of literary and historical texts or works of art and music; (5) Social Analysis, two courses to expose the student to the basic theories and methods of social scientists in the fields of anthropology, economics, international relations, political science, psychology, and sociology; (6) Artistic Creation, one course in studio art or music, creative writing, or theatre to allow the student to experiment with his or her own creativity, and to experience the work of the artist.

Students are free to choose any combination of courses within these guidelines. Under the advisement of the Director of Liberal Studies, the student will be encouraged to pursue an individualized and focused program.

### Bachelor of Arts

#### Lower Division Preparation

Recommended Courses: Arts and Sciences concentration recommended.

To qualify for admission to the program, FIU undergraduates must have met all the lower division requirements including CLAST, completed 60 semester hours, and must be otherwise acceptable into the program.

#### Upper Division Program

**Required Courses:** (33 semester hours)

Courses offered by any of the units of the College of Arts and Sciences, chosen in accordance with academic guidelines of the Program of Liberal Studies, to meet requirements in the four following areas:

| | |
|---|---|
| Scientific Analysis | 6 |
| Humanistic Analysis | 6 |
| Social Analysis | 6 |
| Artistic Creation | 3 |
| Interdisciplinary Colloquia offered by the Liberal Studies Program | 6 |
| Foundations of Liberal Studies | 6 |

**Electives:** The remaining hours will be taken as electives.

#### Limitations

If the student wishes to obtain a second major concurrently, no more than three courses taken to meet the requirements of the other major may be counted towards the requirements of Liberal Studies. If the student wishes to obtain a minor concurrently, no more than two courses taken to meet the requirements of the minor may be counted towards the requirements of Liberal Studies. No student is allowed to take more than six courses in one discipline.

### Course Descriptions

#### Definition of Prefixes

IDS-Interdisciplinary Studies; SSI-Social Sciences: Interdisciplinary

**IDS 2930 Faculty Scholars Seminar (1).** Provides freshman Faculty Scholars the opportunity to participate in the interdisciplinary study of significant themes. May only be taken twice.

**IDS 3930 Foundations of Liberal Studies (3).** This will be a broad synthesis of knowledge and methods in the Arts and Sciences taught from the perspective of different disciplines. Specific topics will be announced in advance.

**IDS 3949 Cooperative Education In Liberal Studies (3).** A student majoring in Liberal Studies may spend several semesters fully employed in industry in a capacity relating to the major.

**IDS 4905 Independent Study (VAR).** Cross-disciplinary topics for individual study and research to be chosen by External Degree students in consultation with their faculty advisors.

**IDS 4920 Liberal Studies Colloquia (3).** Individual sections will study, from an interdisciplinary perspective, issues selected and presented jointly by College faculty. Specific topics will be announced in advance.

**IDS 4930 Foundations of Liberal Studies (3).** This will be a broad synthesis of knowledge and methods in the Arts and Sciences, taught from the perspective of different disciplines. Specific topics will be announced in advance.

**IDS 4949 Cooperative Education In Liberal Studies (3).** A student majoring in Liberal Studies may spend one or two semesters fully employed in industry in a capacity relating to the major.

**SSI 3240 World Prospects and Issues (3).** This course examines, from a multidisciplinary point of view, specific global issues such as food, population, and arms control. The issues discussed may change from one semester to the next.

## Labor Studies

**Required Courses for Liberal Studies:** (33 semester hours)

Thirty-three semester hours of concentration at the 3000 or 4000 level as required for all Liberal Studies students to be selected in consultation with and agreement of advisor. Courses are to meet requirements in the following areas:

| | |
|---|---|
| Scientific Analysis | 6 |
| Humanistic Analysis | 6 |
| Social Analysis | 6 |
| Artistic Creation | 3 |
| Interdisciplinary Colloquia | 6 |
| Foundations of Liberal Studies | 6 |

When possible, these courses should be selected from the list of required and elective courses for Labor Studies. All courses must be completed with a grade of 'C' or better.

**Required Courses for Labor Studies Concentration:** (12 hours)

| | |
|---|---|
| LBS 4001 | Introduction to Labor Studies |

Minimum of three courses (nine hours) to be chosen from the following: (additional courses from this list may be used to fulfill electives). To be chosen in consultation with and agreement of advisor.

| | | |
|---|---|---|
| ECO 3021 | Economics, Man and Society, Micro | 3 |
| LBS 4101 | Theories of the Labor Movement | 3 |
| LBS 4210 | Women and the Labor Movement | 3 |
| LBS 4501 | Labor and Industrial Relations Law | 3 |
| LBS 4900 | Directed Study in Labor Studies | 3 |
| SYO 4360 | Industrial Sociology | 3 |

**Electives** (15 hours)

To be chosen from the following in consultation with and agreement of advisor (some of these courses may require prerequisites).

**Economics**

| | |
|---|---|
| ECO 3011 | Economics, Man and Society, Macro |
| ECO 3101 | Theory of Price |
| ECO 3303 | Development of Economic Thought |
| ECO 4321 | Radical Political Econ |
| ECO 4622 | Economic Development of U.S. |
| ECO 4701 | World Economy |
| ECO 4733 | Multinational Organizations |
| ECP 4203 | Intro to Labor Economics |
| ECP 4204 | Theory of Labor Economics |
| ECS 3402 | Political Economy of U.S. America |
| ECS 3440 | Economy of Central America |
| ECS 4433 | Economy of Caribbean |

**History**

| | |
|---|---|
| AMH 3200 | American History 1850-Present |
| AMH 3270 | Contemporary U.S. History |
| AMH 4251 | The Great Depression |
| AMH 4500 | U.S. Labor History |
| EUH 4006 | Modern Europe, 1789 to the Present |
| LAH 3200 | Latin America in the Modern World |
| LAH 4511 | Argentina: 18th-20th Centuries |
| LAH 4600 | History of Brazil |

**International Relations**

| | |
|---|---|
| INR 3003 | Foundations of International Relations |
| INR 3043 | Population and Society |
| INR 4283 | International Relations, Development, and the Third World |

**Labor Studies**

| | |
|---|---|
| LBS 3401 | Collective Bargaining in Industrial Systems |
| LBS 4150 | Contemporary Labor Issues |
| LBS 4260 | Administration of Labor Organizations |
| LBS 4461 | Labor Dispute Resolution |
| LBS 4654 | Comparative and International Labor Studies |
| LBS 5464 | Fact Finding and Arbitration |

**Theater**

| | |
|---|---|
| SPC 2600 | Public Speaking |

**Philosophy**

| | |
|---|---|
| PHI 3600 | Ethics |
| PHI 3636 | Professional Ethics |
| PHI 4630 | Contemporary Ethical Issues |
| PHM 3200 | Social and Political Philosophy |
| PHM 4440 | Philosophy of Law |

**Political Science**

| | |
|---|---|
| POS 3044 | Government and Politics of the U.S. |
| POS 3071 | Corporate Power and Politics |
| POS 3424 | Legislative Process |
| POS 4122 | State Government and Politics |
| POT 3204 | American Political Thought |
| POT 3302 | Political Ideologies |
| PUP 4004 | Public Policy (U.S.) |

**Psychology**

| | |
|---|---|
| INP 3002 | Introductory Industrial/Organizational Psychology. |

**Sociology/Anthropolgy**

| | |
|---|---|
| ANT 4007 | The Organizer |
| SSI 3303 | Ethical Issues in Social Sciences |
| SYA 3300 | Research Methods |
| SYA 4010 | Sociological Theories |
| SYO 4360 | Industrial Sociology |
| SYO 4530 | Social Stratification (Mobility) |

| | |
|---|---|
| SYP 4421 | Man, Society and Technology |

**Statistics**

| | |
|---|---|
| STA 3013 | Statistics for Social Services |
| STA 3122 | Introduction to Statistics I |
| STA 3123 | Introduction to Statistics II |

**Management**

| | |
|---|---|
| MAN 4401 | Collective Bargaining |
| MAN 4410 | Union-Management Relations |
| MAN 4610 | International and Comparative Industrial Relations |

**Industrial Engineering**

| | |
|---|---|
| EIN 3214 | Safety in Engineering |
| EIN 4261 | Industrial Hygiene |

**Public Administration**

| | |
|---|---|
| PAD 3002 | Intro to Public Administration |
| PAD 4223 | Public Sector Budgeting |
| PAD 5427 | Collective Bargaining in the Public Sector |

## Course Descriptions

### Definition of Prefixes

LBS - Labor Studies

**LBS 3401 Collective Bargaining in Industrial Systems (3).** A comprehensive study of collective bargaining with emphasis upon the private sector. Included will be negotiations and scope of contracts, day-to-day contract administration, and major bargaining issues.

**LBS 4001 Introduction to Labor Studies (3).** History and development of the labor movement, with emphasis on union development as a response to industrialization and technological change. Includes the structure and functioning of modern unions, the development of modern technology, the industrial working class, and the impact of the rural-urban shift of labor.

**LBS 4101 Theories of the Labor Movement (3).** This course deals with theories which have attempted to explain the origins, developments, and functioning of the labor movement.

**LBS 4150 Contemporary Labor Issues (3).** Studies of contemporary labor issues selected from such areas as collective bargaining, arbitration, mediation, legislation, regulative and administrative law, employment discrimination, and union grievances.

**LBS 4210 Women and the Labor Movement (3).** The role of women in the work force and in unions with historical, social, and economic emphasis.

**LBS 4260 Administration of Labor Organizations (3).** Administration of labor organizations; labor policies and practices; legal requirements and financial administration of unions. Prerequisite: LBS 4001.

**LBS 4461 Labor Dispute Resolution (3).** Theory and practice of dispute resolution in industry arbitration processes, grievances, mediation, factfinding, and conciliation. Arbitration of industrial claims and disputes, commercial arbitration. Prerequisite: LBS 4001.

**LBS 4501 Industrial and Labor Relations Law (3).** Studies the history and current functioning of labor law with special emphasis upon the private sector.

**LBS 4654 Comparative and International Labor Studies (3).** A study of labor issues from a comparative and international perspective with emphasis upon the impact of international organizations on labor relations systems and a comparison among major labor relations models.

**LBS 4900 Directed Study in Labor Studies (3).** Supervised reading and/or field research and training.

**LBS 5464 Fact Finding and Arbitration (3).** Study of labor dispute resolution with emphasis on grievances, fact-finding, and arbitration.

# Mathematics

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## Bachelor of Science in Mathematical Sciences

### Lower Division Preparation

To qualify for admission to the program, FIU undergraduates must have met all the lower division requirements including CLAST, completed 60 semester hours, and must be otherwise acceptable into the program. Required Courses: Calculus including multivariable calculus; introductory course in computer programming; linear algebra; differential equations.

*Remarks:* If an entering major student has not met a lower division requirement, the equivalent course must be taken at the University, and will be counted as a non-major elective. The equivalent courses are MAC 3311, MAC 3312, MAC 3313 (Calculus); CGS 3420 (Programming for Engineers) or COP 2210 (PASCAL); MAS 3105 (Linear Algebra); and MAP 3302 (Differential Equations).

### Upper Division Program

**Required Courses**

| | | |
|---|---|---|
| COP 3400 | Assembly Language Programming | 3 |
| COP 3212 | Intermediate Programming | 3 |
| MAD 3104 | Discrete Mathematics | 3 |
| MAD 3401 | Numerical Analysis | 3 |
| MAD 3512 | Introduction to the Theory of Algorithms | 3 |
| MAP 4401 | Advanced Differential Equations | 3 |
| STA 3163-4 | Statistical Methods I and II | 3-3 |

**In addition, two courses from the following list:**

| | | |
|---|---|---|
| COP 3530 | Data Structures | 3 |
| MAA 4402 | Complex Variables | 3 |
| MAD 3305 | Graph Theory | 3 |
| MAP 3103 | Mathematical Modeling | 3 |
| MHF 4302 | Mathematical Logic | 3 |
| STA 5446 | Probability Theory | 3 |

**Electives**

The balance of the 60 semester hour requirement for graduation may be chosen from any courses in the University approved by the student's advisor.

*Remarks:* The following courses are not acceptable for credit toward graduation, unless a student has passed the course before declaring a Mathematical Sci-

ences major: MAC 3233, STA 3013, STA 3122-23, STA 3132, and QMB 3150 (College of Business Administration).

## Minor in Mathematical Sciences

**Required Courses:**

MAC 3311-2-3. Calculus I,II,III (or equivalent).

Four courses from those approved for the Mathematical Sciences Major program. MAP 3302 and MAS 3105 may be included among these four courses. A grade of 'C' or higher is necessary for the minor.

*Remarks*: No mathematical sciences courses (Computer Science, Mathematics, or Statistics) can be applied to more than one minor, nor can courses used to satisfy major requirements be used towards minor requirements. In the case where a mathematical science course is required for a major in one area and a minor in another, the student should see his or her advisor for an appropriate substitution for the requirement of the minor.

## Bachelor of Science in Mathematics

### Lower Division Preparation

To qualify for admission to the program, FIU undergraduates must have met all the lower division requirements including CLAST, completed 60 semester hours, and must be otherwise acceptable into the program. Required Courses: Calculus including multivariable calculus; introductory course in computer programming; linear algebra; differential equations.

*Remarks:* If an entering mathematics major student has not met a lower division requirement, the equivalent course must be taken at the University, and will be counted as a non-major elective. The equivalent courses are: MAC 3311-MAC 3312-MAC 3313 (Calculus); CGS 3420 (Programming for Engineers) or COP 2210 (PASCAL); MAS 3105 (Linear Algebra); and MAP 3302 (Differential Equations).

### Upper Division Program

**Required Courses**

| | | |
|---|---|---|
| MAA 3200 | Introduction to Analysis | 3 |
| MAA 4211 | Advanced Calculus | 3 |
| MAS 4301 | Algebraic Structures | 3 |
| STA 3321 | Mathematical Statistics I | 3 |

**In addition, three courses from each of the following lists.**

**List 1**

| | | |
|---|---|---|
| MAD 4203 | Introduction to Combinatorics | 3 |
| MAA 4402 | Complex Variables | 3 |
| MTG 3212 | College Geometry | 3 |
| MAS 5215 | Number Theory | 3 |
| MAA 4212 | Topics in Advanced Calculus | 3 |
| MAS 4302 | Topics in Algebraic Structures | 3 |
| MTG 4302 | Topology | 3 |

**List 2**

| | | |
|---|---|---|
| MAP 4401 | Advanced Differential Equations | 3 |
| MAD 3305 | Graph Theory | 3 |
| MAP 3103 | Mathematical Modeling | 3 |
| STA 3322 | Mathematical Statistics II | 3 |
| MAD 3401 | Numerical Analysis | 3 |
| MHF 4302 | Mathematical Logic | 3 |

**Electives**

The balance of the 60 semester hour requirement for graduation may be chosen from any courses in the University approved by the student's advisor.

*Remarks:* The following courses are not acceptable for credit toward graduation, unless a student has passed the course before declaring a Mathematics major: MAC 3233, STA 3013, STA 3122-23, STA 3132, and QMB 3150 (College of Business Administration).

## Minor in Mathematics

**Required Courses:**

MAC 3311-2-3 Calculus I-I-III (or equivalent).

Four courses from those approved for the Mathematics Major program. MAP 3302 and MAS 3105 may be included among these four courses. A grade of 'C' or higher in each of these courses is necessary for the minor.

*Remarks:* No mathematical sciences courses (Computer Science, Mathematics, Statistics)can be applied to more than one minor, nor can courses used to satisfy major requirements be used towards minor requirements. In the case where a mathematical sciences course is required for a major in one area and a minor in another, the student should see his or her advisor for an appropriate substitution for the requirement of the minor.

## Certificate in Actuarial Studies

The department offers a certificate in Actuarial Studies. For further information refer to the Certificate section at the end of the College of Arts and Sciences' section.

## Course Descriptions

**Definition of Prefixes**

MAA-Mathematics, Analysis; MAC-Mathematics, Calculus and Pre-Calculus; MAD - Mathematics, Discrete; MAP-Mathematics, Applied; MAS-Mathematics, Algebraic Structures; MAT-Mathematics, General; MGF-Mathematics, General and Finite; MHF-Mathematics, History and Foundations; MTG- Mathematics, Topology and Geometry.

**MAA 3200 Introduction to Analysis (3).** Topics include: naive set theory, functions, cardinality, sequences of real numbers and limits. Emphasis on formal proofs. Prerequisite: MAC 3313.

**MAA 4211 Advanced Calculus (3).** An intense study of the foundations of calculus. Topics may include: the real number system, continuity, differentiation, Riemann-Stieltjes integration, and series of functions. Note: The student must complete MAA 3200 before attempting this course. Prerequisites: MAC 3313, MAS 3105 and MAA 3200.

**MAA 4212 Topics In Advanced Calculus (3).** A sequel to MAA 4211. Topics may include: theory of integration; analysis in several variables; and Fourier series. Prerequisite: MAA 4211.

**MAA 4402 Complex Variables (3).** An introduction to complex variables, beginning with the algebra and geometry of the complex number system. Topics include: complex functions; analytic functions; Cauchy's theorem and its consequences; Taylor and Laurent series; residue calculus; evaluation of real integrals and summation of series; conformal mapping. Prerequisites: MAC 3313, and MAP 3302 or MAA 4211.

**MAC 2132 Pre-calculus Mathematics (3).** Topics to be covered include: functions, exponential and logarithmic functions, trigonometry and the basics of analytic geometry. Prerequisite: Two years of high school algebra.

**MAC 3233 Calculus For Business (3).** A one semester introduction to the basic notions of calculus. Specific topics include: Differential Calculus using polynomial, exponential and logarithmic functions, and its application to optimization; integral calculus with area and probability applications. Prerequisite: MAC 2132 or working knowledge of algebra.

**MAC 3311-MAC 3312 Calculus I and II (3-5).** An introduction to basic concepts, computations and applications in calculus. The first course deals with basic concepts, techniques and applications of the derivative, and an introduction to the integral. The second course deals with integration techniques and applications of the integral, infinite series, and Taylor series. Prerequisite: Trigonometry or MAC 2132.

**MAC 3313 Multivariable Calculus (3).** This course deals with the differential and integral calculus of real valued multivariable functions. The topics include: directional and partial derivatives, gradients, and their applications; differential calculus of vector valued functions; multiple, iterated, line, and surface integrals. Prerequisite: MAC 3312 or equivalent.

**MAD 3104 Discrete Mathematics (3).** Sets, functions, relations, permutations, and combinations, propositional logic, matrix algebra, graphs and trees, Boolean algebra, switching circuits. Prerequisites: COP 2210 or CGS 3420 and MAC 3311.

**MAD 3305 Graph Theory (3).** An introduction to the study of graphs. Topics include the following: paths and circuits, connectedness, trees, shortest paths, networks, planar graphs, the coloring of graphs, and directed graphs. Applications of graphs to computer science will be discussed. Prerequisites: COP 2210 or CGS 3420 and either MAS 3105 or MAD 3104.

**MAD 3401 Numerical Analysis (3).** Basic ideas and techniques of numerical analysis. Topics include: finite differences, interpolation, solution of equations, numerical integration and differentiation, applications, introduction to applied linear algebra. This course will make extensive laboratory use of the computer facility. Prerequisites: COP 2210 or CGS 3420 and MAC 3312.

**MAD 3512 Theory of Algorithms (3).** Strings, formal languages, finite state machines, Turing machines, primitive recursive and recursive functions, recursive unsolvability. Prerequisite: MAD 3104.

**MAD 4203 Introduction to Combinatorics (3).** A survey of the basic techniques of combinatorial mathematics. Topics will include the Pigeonhole Principle, Binomial Coefficients, Inclusion-Exclusion, Recurrence Relations, and Generating Functions. Prerequisites: MAC 3313 or both MAC 3312 and MAD 3104.

**MAP 3103 Mathematical Modeling and Applications (3).** A course to provide an understanding of the use of mathematical models in the description of the real world. Basic principles in the philosophy of formal model building as well as specific models will be considered. Prerequisites: MAS 3105 and either MAC 3313 or MAP 3302.

**MAP 3104 Topics in Mathematical Modeling (3).** A sequel to MAP 3103. In-depth study of techniques listed for MAP 3103. Prerequisite: MAP 3103.

**MAP 3302 Differential Equations (3).** An introduction to differential equations and their applications, based upon a knowledge of calculus. Topics to include: initial value problems of the first order, numerical solutions, systems of differential equations, linear differential equations, Laplace transforms, series solutions. Prerequisite: MAC 3312.

**MAP 4401 Advanced Differential Equations (3).** A second course in differential equations. Topics may include: Bessel functions and other special functions arising from classical differential equations, Sturm-Liouville problems, partial differential equations, transform techniques. Prerequisites: MAP 3302 and MAC 3313.

**MAP 5236 Mathematical Techniques of Operations Research (3).** This course surveys the mathematical methods used in operations research. Topics will be chosen from linear programming, dynamic programming, integer programming, network analysis, classical optimization techniques, and applications such as inventory theory. Prerequisite: MAP 5117 and MAS 3105 and either CGS 3420 or COP 3210.

**MAS 3105 Linear Algebra (3).** An introduction to the topics in linear algebra most often used in applications. Topics include: matrices and their applications; simultaneous linear equations and elementary operations; linear dependence; vector spaces; rank and inverses; inner products and 'best' approximations; numerical solutions of simultaneous linear equations; eigenvalues and eigenvectors; iterative methods for calculating eigenvalues; and systems of linear equations. Prerequisite: MAC 3312.

**MAS 4301 Algebraic Structures (3).** An introduction to abstract mathematical structures of modern algebra. Fundamental concepts of groups, rings, and fields will be studied. Note: the student must complete MAA 3200 before attempting this course. Prerequisites: MAS 3105 and MAA 3200.

**MAS 4302 Topics in Algebraic Structures (3).** A sequel to Algebraic Structures. Topics may include: a continuation of the study of groups, rings and/or fields; polynomial domains; Euclidean domains; and Galois theory. Prerequisite: MAS 4301.

**MAS 5215 Number Theory (3).** Topics to be discussed are selected from the following: congruences, Diophantine equations, distribution of primes, primitive roots, quadratic reciprocity, and classical theorems of number theory.

**MAT 2949 Cooperative Education in Mathematical Sciences (1-3).** One semester of full-time supervised work in an outside organization taking part in the University Co-op program. A written report and supervisor evaluation will be required of each student. Prerequisites: Calculus I and COP 2210.

**MAT 3905 Independent Study (VAR).** Individual conferences, assigned readings, and reports on independent investigations.

**MAT 3930 Special Topics (VAR).** A course designed to give groups of students an opportunity to pursue special studies not otherwise offered.

**MAT 3949 Cooperative Education in Mathematical Sciences (1-3).** One semester of full-time supervised work in an outside organization taking part in the University Co-op Program. Limited to students admitted to the Co-op Program. A written report and supervisor evaluation will be required of each student. Prerequisites: Calculus II and COP 3212.

**MAT 4905 Independent Study (VAR).** Individual conferences, assigned readings, and reports on independent investigations.

**MAT 4930 Special Topics (VAR).** A course designed to give groups of students an opportunity to pursue special studies not otherwise offered.

**MAT 4943 Mathematical Sciences Internship (VAR).** A special program to encourage students to get on-the-job experience in computer sciences, statistics, or mathematics in an industrial enterprise, governmental agency or other organization. Requirements: minimum grade of 'B' or higher in all courses in the major area, and approval by Departmental Internship Committee. Application is required at least one term in advance of registration for this course.

**MAT 4949 Cooperative Education in Mathematical Sciences (1-3).** One semester of full-time supervised work in an outside organization taking part in the University Co-op Program. Limited to students admitted to the Co-op Program. A written report and supervisor evaluation will be required of each student. Prerequisites: Calculus II, a statistics course, and COP 3120.

**MGF 1202 Finite Mathematics (3).** Study of concepts and applications involving finite mathematical processes such as sets, combinatorial techniques,

formal logic, discrete probability, linear systems, matrices, linear programming. Prerequisite: Working knowledge of high school algebra.

**MHF 4302 Mathematical Logic (3).** A study of formal logical systems and their applications to the foundations of mathematics. Topics to be selected from the following: definition of mathematical proofs; set theory; analysis formalized with the predicate calculus; theorem of Godel and Church; recursive function theory; and idealized computers. Prerequisite: MAA 3200 or MAD 3512.

**MTG 3212 College Geometry (3).** A study of the basic structure of Euclidean geometry together with topics from advanced Euclidean geometry and non-Euclidean geometry. Prerequisite: High school geometry.

**MTG 4302 Topology (3).** An introductory course in topology requiring a prerequisite knowledge of calculus. Topics to be discussed will be selected from the following: topological spaces, metric spaces, continuity, completeness, compactness, separation axioms, products spaces, subspaces, convergence, and homotopy theory. Prerequisites: MAC 3313, MAS 3105, and MAA 3200.

**STA 4603-STA 4604 Mathematical Techniques of Operations Research I and II (3-3).** An introduction to those topics in mathematics associated with studies in operations research. Topics include the following: linear programming and related topics, dynamic programming, queuing theory, computer simulation, network analysis, inventory theory, decision theory, integer programming. Prerequisites: MAS 3105 and either STA 3033 or STA 3322.

## Modern Languages

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**Irmenia Aragon,** *Instructor, (North Miami Campus)*
**Aurelio Baldor,** *Instructor*
**Rodolfo Cortina,** *Professor*
**James O. Crosby,** *Professor*
**Leonel A. de la Cuesta,** *Associate Professor*
**Lucia Helena,** *Associate Professor*
**Danielle Johnson-Cousin,** *Associate Professor*
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**Yvonne Guers-Villate,** *Professor Emeritus*
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**Ramon Mendoza,** *Professor (North Miami Campus)*
**Ana Roca,** *Assistant Professor*
**Reinaldo Sanchez,** *Professor*
**Andree Stayman,** *Instructor*
**Marcelle Welch,** *Associate Professor*
**Florence Yudin,** *Professor*
**Malda Watson Espener,** *Associate Professor*

### Bachelor of Arts

#### Lower Division Preparation

Required Courses: Eighteen semester hours of elementary and intermediate foreign language or equivalent proficiency. If these courses are not completed prior to entry to the University, they will be required as part of the upper division program as non-major electives.

To qualify for admission to the program, FIU undergraduates must have met all the lower division requirements including CLAST, completed 60 semester hours, and must be otherwise acceptable into the program.

#### Upper Division Program: (60 semester hours)

Required Courses

| | |
|---|---|
| Foreign Language | 30 semester hours |
| Electives | 30 semester hours |

Students in the Teacher Preparation Program carry two majors: Modern Language and Modern Language Education and must request admission to both programs. (Students interested in teacher certification should contact the College of Education at 348-2721.)

#### Requirements for all Modern Language Majors

All majors must have a designated faculty advisor, and all are required to take 30 semester hours in the Department of Modern Languages, with a grade of 'C' or higher.

#### Requirements For Spanish Majors

To undertake a major in Spanish, a student must demonstrate minimum proficiency in the language. This may be done by a written examination administered by the Department, or by completing SPN 3301 (Non-native speakers of Spanish) or SPN 3341 (Native speakers). SPN 3302 must be part of the 30 credit hours of upper division work taken (unless the student is exempted by examination), and credit hours must be distributed according to one of the following plans:

| | A | B | C |
|---|---|---|---|
| SPN 3302[1] | 3 | 3 | 3 |
| Literature courses | 9 | 9 | 6 |
| Linguistic courses | 9 | 6 | 9 |
| Culture courses | | 3 | 3 |
| Departmental electives | 9 | 9 | 9 |

[1]Unless exempted by examination, in which case the student has three additional hours of electives.

Introduction to General Linguistics (LIN 3010 or equivalent) must be taken before other linguistics offerings; otherwise, there is no prescribed sequence of courses for the major.

#### Requirements for French Majors

The requirements for a major in French are three or four literature courses; one civilization course; one French linguistics course. The remaining credits should be taken in language courses, such as FRE 3410, FRE 3420, FRE 3421, FRE 3780, FRT 3800, FOT 3810 unless the student can demonstrate proficiency in these areas. A student is also generally expected to take an introductory course to literature such as FRW 3200 before registering for upper level literature courses.

#### Requirements for Other Language Majors

A major in a language other than Spanish or French may take only 21 credits in the major target language, but completion of at least two semesters of a second foreign language is recommended. There is no fixed sequence of courses required, and a student may enroll in any course offered for majors, provided he or she meets the course prerequisites.

### Minor in French Language and Culture

A student majoring in another discipline may earn an academic minor in French Language and Culture by taking 1) 12 semester hours of course work in French language FRE 3410, FRE 3420/3421, FRE 3780; 2) three semester hours in French Civilization and Culture FRE 3500 or FRE 4501; 3) three semester hours of restricted electives courses in French linguistics, French Translation Skills or Introduction to Literature, FRW 3200.

### Minor in Portuguese

A student majoring in another discipline may earn an academic minor in Portuguese by taking 12 semester hours of course work in the language at the level of POR 3420 or above, and six additional hours in Portuguese or in approved courses in a related discipline, such as linguistics or the civilization of Portuguese-speaking peoples.

## Minor in General Translation Studies

In order to obtain an academic minor in General Translation Studies, a student takes 12 semester hours in translation/interpretation courses (FOT, FRT, or SPT prefix), with grades of B or better, and nine additional hours in courses of immediate relevance to the program, to be approved by the Director of the program. Normally these will be selected from among offerings in Political Science, Economics, International Relations, Sociology, Anthropology, Computer Science or Modern Languages. At least two of them should be taken outside of Modern Languages. Courses in basic and intermediate instruction shall not be counted for the minor.

## Minor in Spanish Language and Culture

### Required Credits for Minor

Fifteen credits of Core Courses and three credits of electives. Total: 18 semester hours.

### Core Courses

| | | |
|---|---|---|
| SPN 3401 | Advanced Spanish Conversation (non-natives)[1] | 3 |
| SPN 3301 | Review Grammar / Writing I (non-natives)[2] | 3 |
| | or | |
| SPN 3341 | Advanced Spanish for Native Speakers[2] | |
| SPN 3302 | Review Grammar and Writing II | 3 |
| SPN 3820 | Dialectology | 3 |
| SPN 4500 | Spanish Culture | 3 |

### Elective Courses

One 3-credit course selected from among the following[3]

| | | |
|---|---|---|
| SPN 3780 | Phonetics[4] | 3 |
| SPW 3930 | Special Topics | 3 |
| SPT 3800 | Introduction to Translation Skills | 3 |
| SPN 3013 | Language Skills for Professional Personnel | 3 |
| SPN 3440 | Spanish for Business Composition | 3 |
| SPN 3520 | Spanish American Culture | 3 |

[1]Native speakers will take SPN 3520 Spanish American Culture or SPN 4501 Topics in Civilization and Culture instead of Advanced Spanish Conversation.

[2] Can be substituted for another course in Translation Skills, Linguistic or Spanish Literature, with permission of Spanish advisors only.

[3]Or another advanced course in the Department with the approval of the students' faculty advisor.

[4]Can be replaced by SPN 4790 (Contrastive Phonology).

### Basic Language Instruction

The department offers three-semester sequences of instruction in beginning and intermediate Arabic, Chinese, French, German, Hebrew, Italian, Japanese, Portuguese, Spanish, Russian, and beginning instruction in other languages.

The courses in basic language instruction are designed primarily for persons wishing to acquire conversational ability in a foreign language; but they provide training in all four language skills listening, speaking, reading, and writing. Students are advised to consult the Departmental course listing for specific sections.

## Course Descriptions

### Definition of Prefixes

ARA-Arabic Language; CHI-Chinese Language; FOL-Foreign Languages; FOT-Foreign Languages in Translation; FOW-Foreign Languages, Comparative Literature; FRE-French Language; FRT-French Translation; FRW-French Literature (Writings); GER-German Language; GET-German Translation; HBR -Hebrew; ITA-Italian Language; ITT-Italian Translation; JPN-Japanese Language; LIN-Linguistics; POR-Portuguese Language; POW-Portuguese Literature (Writings); PRT-Portuguese Translation; RUS-Russian Language; SPN-Spanish Language; SPT-Spanish Translation; SPW-Spanish Literature (Writings).

(See English listing for additional Linguistics courses.) Application of basic language skills.

**ARA 3130 Arabic I (5).** Provides training in the acquisition and application of basic language skills.

**ARA 3131 Arabic II (5).** Provides training in the acquisition and application of basic language skills.

**ARA 3210 Intermediate Arabic (5).** Provides intermediate training in the acquisition and application of basic language skills.

**CHI 3130 Chinese I (5).** Provides training in the acquisition and application of basic language skills.

**CHI 3131 Chinese II (5).** Provides training in the acquisition and application of basic language skills.

**CHI 3210 Intermediate Chinese (5).** Provides intermediate training in the acquisition and application of basic language skills.

**FOL 1000 Elementary Foreign Language (3).** Emphasis on oral skills, contemporary language and culture. Content oriented to students with specific professional or leisure interests. For languages not often taught. This course is not part of a series. No prerequisites.

**FOL 3013 Language Skills for Professional Personnel (3).** The course is geared to the special linguistic needs of community groups (medical, business, technical, etc.).

**FOL 3732 Romance Linguistics (3).** The common and distinctive Romance features. Survey of linguistic geography and internal/external influences.

**FOL 3905 Independent Study (1-3).** Project, field experience, readings, or apprenticeship.

**FOL 3930 Special Topics (3).** Readings and discussion of literary/linguistic topics to be determined by students and teacher.

**FOL 3949 Cooperative Education in Modern Languages (3).** A student majoring in one of the Humanities (English, History, Modern Languages, Visual Arts or Performing Arts) may spend one or two semesters fully employed in industry or government in a capacity relating to the major. Prerequisite: Permission of Cooperative Education Program and major department.

**FOL 3955 Foreign Study (3-12).** Study abroad credits. Individual cases will be evaluated for approval.

**FOL 4905 Independent Study (1-3). Project,** field experience, readings, or research.

**FOL 4930 Special Topics (3).** Independent readings, research, or project.

**FOL 4935 Senior Seminar (3).** Topics and approach to be determined by students and instructor.

**FOL 4949 Cooperative Education in Modern Languages (3).** A student majoring in one of the Humanities (English, History, Modern Languages, Visual Arts or Performing Arts may spend one or two semesters fully employed in industry or government in a capacity related to the major. Prerequisite: Permission of Cooperative Education Program and major department.

**FOL 4958 Foreign Study: Advanced Language Literature (VAR 3-12).**

Study abroad credits. Individual cases will be evaluated for approval.

**FOT 2120 Literature in Translation (3).** Masterpieces of French literature in English. Comparative use of the original text. Discussion and interpretation.

**FOT 3800 Translation/Interpretation Skills (3).** Emphasis on basic principles and practice application.

**FOT 3810 Creative Writing/Translation (3).** Training through non-structured writing. Examination of various approaches to the problems and objectives of creative translation.

**FOT 4130 European Literature in Translation (3).** For students proficient in more than one foreign language. Content and focus to be determined by student and instructor.

**FOT 4801 Professional Translation/Interpretation (3).** Techniques and resources for professional translation and interpretation. Prerequisite: FOT 3800.

**FOL 5735 Romance Linguistics (3).** The common and distinctive Romance features. Survey of linguistic geography and internal/external influences.

**FOL 5906 Independent Study (1-3).** Project, field experience, readings, or research.

**FOT 5125 Literature in Translation (3).** Masterpieces of world literature. Open to students who are proficient in more than one language.

**FOT 5805 Translation/Interpretation Arts (3).** The language barrier and translation and interpretation. Types, modes, and quality of T/I: philological, linguistic, and socio-linguistic theories. History of T/I from Rome to date. The impact of T/I on Inter-American developments. Prerequisite: Graduate standing or permission of instructor.

**FOW 3520 Prose and Society (3).** The dynamics of participation and alienation between prose writers and their environment.

**FOW 3540 Bicultural Writings (3).** Experiment in linguistic pluralism. Content and focus to be determined by the international community.

**FOW 3580 Intellectual History (3).** The interaction or dissociation among writers in a critical historical period. Study of primary sources and their contemporary evaluations.

**FOW 3582 Literature of Reform (3).** The consciousness of change in verbal art.

**FOW 3584 Literature of Repression (3).** The consciousness of constraints, their adoption and/or rejection in verbal art.

**FOW 4390 Genre Studies (3).** Examination of a single literary form (e.g. short story, poetry), or the study of interaction between literary types (e.g. novel and drama).

**FOW 4590 Creative Modes (3).** Discussion of a single mode or a plurality of epoch styles such as classical/baroque, realism/surrealism. The peculiar/common features of expressive media.

**FOW 4790 The Literary Generation (3).** The real and apparent shared ideals of an artistic generation, its influence and range.

**FOW 4810 Problems in Reading and Interpretation (3).** The identification and appreciation of techniques for sensitive reading and discussion of literary texts.

**FOW 5395 Genre Studies (3).** Examination of a single literary form (e.g. short story, poetry), or the study of interaction between literary types (e.g. novel and drama).

**FOW 5545 Bicultural Writings (3).** Experiment in linguistic pluralism. Content and focus to be determined by the international community.

**FOW 5587 Comparative Studies (3).** Cross-over and distinctiveness in a multi-language problem, period, or aesthetic.

**FOW 5934 Special Topics in Language/Literature (3).** Content and objectives to be determined by students and teacher.

**FOW 5938 Graduate Seminar (3).** Topic and approach to be determined by students and instructor. (Approval of the Department required.)

**FRE 1120 French I (5).** Course designed specifically for beginning university students with no previous language study. Emphasis on oral French and on acquiring basic language skills.

**FRE 1121 French II (5).** Emphasis on oral French and on acquiring basic language skills. This course completes the lower-division language requirement.

**FRE 2200 Intermediate French (5).** Provides intermediate training in the acquisition and application of basic language skills.

**FRE 2270 Foreign Study (12).** Intermediate level. One semester full-time credit for foreign residence and study. Individual cases will be evaluated for approval.

**FRE 3000 Elementary French (3).** Emphasis on oral skills, contemporary language and culture. Content oriented to students with specific professional or leisure interests. This course is not part of a series. No prerequisites.

**FRE 3013 Language Skills for Professional Personnel (1-3).** The course is geared to the special linguistic needs of community groups (medical, business, technical, etc.).

**FRE 3240 Intermediate French Conversation (1).** This course is designed to help students maintain and increase their conversational ability in the language while unable to continue the regular sequence. May be repeated twice. Prerequisite: FRE 1121 or equivalent.

**FRE 3410 Advanced French Conversation (3).** To develop oral proficiency skills and a greater awareness of French culture.

**FRE 3413 Communication Arts (3).** Oral interpretation and dramatic reading. Original and non-original texts will be the content of the course. Study of shared modes of experience and their individual linguistic expression in an acquired language.

**FRE 3420 Review Grammar/Writing I (3).** Practice in contemporary usage through selected readings in culture and civilization. Development of writing and speaking ability in extemporaneous contexts. The course will be conducted exclusively in the target language.

**FRE 3421 Review Grammar/Writing II (3).** Examination of grammatical theory; discussion of the modern essay. Practice in the detection and correction of errors in usage. The course will focus on current international events as content for informal talks and composition.

**FRE 3440 Business French (3).** Introduces the minor and non-major to the culture, economy, and commerce of modern-day France. Extensive practice in business writing and communication. Conducted in French. Prerequisite: FRE 1121.

**FRE 3500 Civilization I (3).** Open to any student who understands the target language. The development of a particular civilization. Emphasis on the evolution of a society, its ideas and its values.

**FRE 3740 Applied Linguistics (3).** Examination of available linguistic materials for self-instruction. Problem solving in syntax and phonetics, through the application of modern/traditional methods.

**FRE 3780 Phonetics (3).** The application of phonetic theory and practice for speech refinement. Study of sound patterns in communication and creative activity.

**FRE 3820 Dialectology (3).** Definition and analysis. Problem-solving in dialect classification.

**FRE 4422 Advanced French Composition (3).** A study of various aspects of forms and styles, with emphasis on expository writing in French. Prerequisite: FRE 3421.

**FRE 4470 Foreign Study: Advanced Language/Literature (12).** Full-semester credit for foreign residence and study/work. (Approval of Department required.)

**FRE 4501 Civilization II (3).** Open to any student who understands the target language. The making of a modern culture. The ideological, political, and economic background of contemporary culture.

**FRE 4791 Contrastive Phonology (3).** Contrasts in the sound systems of English and French.

**FRE 4800 Contrastive Morphology (3).** Contrasts in the morphology and syntax of English and French.

**FRE 4840 History of the Language (3).** The internal and external history of language development. Examination of model texts from key periods of evolution. Prerequisite: FRE 3780 or LIN 3010 or LIN 3013.

**FRE 4935 Senior Seminar (3).** Topic and approach to be determined by students and instructor.

**FRE 5060 Language for Reading Knowledge (3).** Designed primarily for graduate students who wish to attain proficiency for M.A. and Ph.D. requirements. Open to any student who has no prior knowledge of the language.

**FRE 5061 Language for Reading Knowledge (3).** Emphasis on translation of materials from the student's field of specialization. Prerequisite: FRE 5060 or equivalent.

**FRE 5565 Studies in Bilingualism (3).** Readings and analysis of bilingual programs and binational goals.

**FRE 5735 Special Topics in Linguistics (3).** Content to be determined by students and instructor. (Approval of Department required.)

**FRE 5755 Old French Language (3).** Introduction to the phonology, morphology, and syntax of the Old French language. Reading and analysis of the 12th and 13th century texts in their original. Comparison of major medieval dialects. Prerequisite: FRE 4840 or FRE 5845.

**FRE 5845 History of the Language (3).** The internal and external history of language development. Examination of model texts from key periods of evolution. Prerequisite: FRE 3780 or LIN 3010 or LIN 3013.

**FRE 5908 Independent Study (1-3).** Project, field experience, readings, or research.

**FRT 5805 Translation/Interpretation Arts (3).** Techniques of professional translation and interpretation. Prerequisite: FRT 4801.

**FRW 5395 Genre Studies (3).** Examination of a single literary form (e.g. short story, poetry), or the study of interaction between literary types (e.g. novel and drama).

**FRW 5934 Special Topics in Language Literature (3).** Content and objectives to be determined by student and instructor.

**FRW 5938 Graduate Seminar (3).** Topic and approach to be determined by students and instructor. (Approval of the Department required.)

**FRT 3800 Basic Translation Exercises (3).** Emphasis on basic principles and practice application. Prerequisite: FRE 3421.

**FRT 4801 Professional Translation (3).** Techniques and resources for professional translation. Prerequisite: FRT 3810.

**FRW 3200 Introduction to Literature (3).** Close reading and analysis of prose and poetry. Introduction to the methods of literary criticism. Selected readings in international sources.

**FRW 3280 French 19th Century Novel (3).** Four major novels by major 19th century novelists will be selected to illustrate the development of novelist techniques as well as of a different conception of the role of the novel that finally made it most important literary genre. Prerequisite: FRW 3810 or another FRW course.

**FRW 3300 French Comedies (3).** A study in French comedies from the 15th century to the 19th century, with special emphasis on Moliere's plays. Prerequisite: FRW 3200.

**FRW 3323 French 19th Century Drama (3).** Plays will be chosen to illustrate various literary movements in 19th century French drama: Romanticism, Realism, Naturalism, and Symbolism. Prerequisite: FRW 3200.

**FRW 3370 French 19th and 20th Century Short Stories (3).** Great short stories by Maupassant, Merimee, Flaubert, Camus, and Sartre will be studied to familiarize the student with literary criticism by a close reading and analysis of short texts. Prerequisite: FRE 3421.

**FRW 3520 Prose and Society (3).** The dynamics of participation and alienation between prose writers and their environment.

**FRW 3532 French Romantic Literature (3).** A study of French Romantic generation through the works of Lamartine, Hugo, de Musset, etc. Prerequisite: FRW 3200.

**FRW 3810 Problems in Reading and Interpretation (3).** The identification and appreciation of techniques for sensitive reading and discussion of literary texts.

**FRW 3905 Independent Study (3).** Project, field experience, readings, or apprenticeship.

**FRW 3930 Special Topics (3).** Readings and discussion of literary/linguistic topics to be determined by students and instructor.

**FRW 4212 French Classical Prose (3).** Study of major works of 17th century French authors such as Descartes, Pascal, La Rochefoucauld, La Bruyere, etc. Prerequisites: FRW 3200, and another FRW course.

**FRW 4272 French Novels from the Classical Period (3).** A study of major 17th and 18th century French novels. Course conducted in French. Prerequisites: FRW 3200, and another FRW course.

**FRW 4281 French 20th Century Novel (3).** Novels by different novelists will be selected to illustrate the variety of the 20th century French novel from Gide and Proust, Malraux, Bernanos or Mauriac to existentialism and the New Novel. Prerequisites: FRW 3200, and another FRW course.

**FRW 4310 Seventeenth-Century French Drama (3).** A study of French classical aesthetics through the plays of Corneille, Moliere, and Racine. Prerequisites: FRW 3200, and another FRW course.

**FRW 4324 French 20th Century Theatre (3).** Plays by various dramatists will be selected to give an idea of the scope

and variety of contemporary French theatre from Claudel and Giraudoux to Existentialism and the theatre of the absurd. Prerequisites: FRW 3200, and another FRW course.

**FRW 4390 Genre Studies (3).** Examination of a single literary form (e.g. short story, poetry), or the study of interaction between literary types (e.g. novel and drama).

**FRW 4410 French Medieval Literature (3).** A study in different literary forms prevalent during the 12th and 15th centuries. Read in modern French; course will be conducted in French. Prerequisites: FRW 3200, and another FRW course.

**FRW 4420 Sixteenth-Century French Literature (3).** A study of major authors of the French Renaissance, Rabelais, Ronsard, Montaigne, etc. Course conducted in French. Prerequisites: FRW 3810 or 3820, and another FRW course.

**FRW 4570 French Existentialists Literature (3).** Novels and plays by existentialist writers will be studied as representative of a major philosophical trend in the mid-20th century. Prerequisites: FRW 3810 or 3820, and another FRW course.

**FRW 4583 French Women Novelists (3).** Novels by various women writers, from the 19th century but mostly from the 20th century, will be selected to illustrate the increasing number of important writings by contemporary writers as well as the scope and variety of their concerns. Prerequisites: FRW 3810 or 3820, and another FRW course.

**FRW 4590 Creative Modes (3).** Discussion of a single mode or a plurality of epoch styles such as classical/baroque, realism/surrealism. The peculiar/common features of expressive media.

**FRW 4905 Independent Study (1-3).** Project, field experience, readings, or research.

**FRW 4930 Special Topics (3).** Independent readings, research, or project.

**GER 1120 German I (5).** Provides training in the acquisition and application of basic language skills.

**GER 1121 German II (5).** Provides training in the acquisition and application of basic language skills.

**GER 2210 Intermediate German (5).** Provides intermediate training in the acquisition and application of basic language skills.

**GER 3240 German Intermediate Conversation (1).** This course is designed to help students maintain and increase their conversational ability in the language while unable to continue the regular sequence. May be repeated twice. Prerequisite: GER 1121 or equivalent.

**GER 3420 Review Grammar/Writing I (3).** Practice in contemporary usage through selected readings in culture and civilization. Development of writing and speaking ability in extemporaneous contexts. The course will be conducted exclusively in the target language.

**GER 4905 Independent Study (1-3).** Project, field experience, readings, or research.

**GER 4930 Special Topics (3).** Independent readings, research, or project.

**GER 5060 German for Reading Knowledge (3).** Designed primarily for graduate students who wish to attain proficiency for M.A. or Ph.D. requirements. Open to any student who has no prior knowledge of the language.

**GER 5061 German for Reading Knowledge (3).** Emphasis on translation of materials from the student's field of specialization. Prerequisite: GER 5060 or the equivalent.

**GET 3100 Literature in Translation (3).** Masterpieces in German literature in English. Comparative use of the original text. Discussion and interpretation.

**HBR 1120 Hebrew I (5).** Provides training in the acquisition and application of basic language skills.

**HBR 1121 Hebrew II (5).** Provides training in the acquisition and application of basic language skills.

**HBR 2200 Intermediate Hebrew (5).** Provides training in the acquisition and application of basic language skills.

**ITA 1120 Italian I (5).** Provides training in the acquisition and application of basic language skills.

**ITA 1121 Italian II (5).** Provides training in the acquisition and application of basic language skills.

**ITA 2210 Intermediate Italian (5).** Provides intermediate training in the acquisition and application of basic language skills.

**ITA 3240 Italian Intermediate Conversation (1).** This course is designed to help students maintain and increase their conversational ability in the language while unable to continue the regular sequence. May be repeated twice. Prerequisite: ITA 3131 or equivalent.

**ITA 3420 Review Grammar/Writing I (3).** Practice in contemporary usage through selected readings in culture and civilization. Development of writing and speaking ability in extemporaneous contexts. The course will be conducted exclusively in the target language.

**ITA 4905 Independent Study (1-3).** Project, field experience, readings, or research.

**ITA 4930 Special Topics (3).** Independent readings, research, or project.

**ITT 3110 Literature in Translation (3).** Masterpieces of Italian literature in English. Comparative use of the original text. Discussion and interpretation.

**JPN 1120 Japanese I (5).** Provides training in the acquisition and application of basic language skills.

**JPN 1121 Japanese II (5).** Provides training in the acquisition and application of basic language skills.

**JPN 3210 Intermediate Japanese (5).** Provides intermediate training in the acquisition and application of basic language skills.

**LIN 3010 Introduction to General Linguistics (3).** Examination and synthesis of the concepts and perspectives of major contributions to language theory.

**LIN 3200 Phonetics (3).** The application of phonetic theory and practice for speech refinement. Study of sound patterns in communication and creative activity. Prerequisite: LIN 3010 or equivalent.

**LIN 3610 Dialectology (3).** Definition and analysis. Problem-solving in dialect classification. Prerequisite: LIN 3010 or equivalent.

**LIN 4326 Contrastive Phonology (3).** For students proficient in more than one foreign language. Choice of languages to be determined by students and instructor. Prerequisite: LIN 3010 or equivalent.

**LIN 4433 Contrastive Morphology (3).** For students proficient in more than one foreign language. Content and emphasis to be determined by students and instructor. Prerequisite: LIN 3010 or equivalent.

**LIN 4620 Studies in Bilingualism (3).** Readings and analysis of bilingual programs and binational goals. Prerequisite: LIN 3010 or equivalent.

**LIN 4702 Applied Linguistics (3).** Examination of available linguistic materials for self-instruction. Problem-solving in syntax and phonetics, through the ap-

plication of modern/traditional methods. Prerequisite: LIN 3010 or equivalent.

**LIN 4722 Problems in Language Learning (3).** Primarily designed for prospective teachers, but open to all interested students. The course will aim to devise approaches to difficulties commonly experienced in syntax, usage, reading and comprehension. Prerequisite: LIN 3010 or equivalent.

**LIN 5207C Acoustic Phonetics (3).** Introduction to principles of acoustic and instrumental phonetics, including the physics of speech sounds and use of the sound spectrograph and other instruments. Prerequisites: LIN 3010 and one additional course in phonetics/phonology. Corequisite: One of the prerequisites may be counted as a corequisite.

**LIN 5760 Research Methods in Linguistics (3).** The collection and analysis of linguistic data: sampling techniques, interviews, recordings, questionnaires, transcription, basic statistical procedures, including the use of computer analysis. Prerequisite: LIN 3010 or equivalent.

**LIN 5601 Sociolinguistics (3).** Principles and theories of linguistic variation with special attention to correspondences between social and linguistic variables. Prerequisite: LIN 3010 or equivalent.

**LIN 5613 Dialectology (3).** The geography of language variation: linguistic geography, atlases, national and regional studies. Dialectology within a modern sociolinguistic frame work; research approaches. Prerequisites: LIN 3010 and one other graduate-level linguistics course.

**LIN 5625 Studies in Bilingualism (3).** Readings and analysis of bilingual programs and binational goals. Prerequisite: LIN 3010 or equivalent.

**LIN 5720 Second Language Acquisition (3).** Research, theories, and issues in second language acquisition. Topics include the Monitor Model, the role of the first language, motivation, age, individual differences, code-switching, and the environment; affective variables and attitudes.

(See English listing for additional Linguistics courses.)

**POR 1130 Portuguese I (5).** Provides training in the acquisition and application of basic language skills.

**POR 1131 Portuguese II (5).** Provides training in the acquisition and application of basic language skills.

**POR 2200 Intermediate Portuguese (5).** Provides intermediate training in the acquisition and application of basic language skills.

**POR 3000 Elementary Portuguese (3).** Emphasis on oral skills, contemporary language, and culture. Content oriented to students with specific professional or leisure interests. This course is not part of a series. No prerequisites.

**POR 3240 Portuguese Intermediate Conversation (1).** This course is designed to help students maintain and increase their conversational ability in the language while unable to continue the regular sequence. May be repeated twice. Prerequisite: POR 3131 or equivalent.

**POR 3420 Review Grammar/Writing I (3).** Practice in contemporary usage through selected readings in culture and civilization. Development of writing and speaking ability in extemporaneous contexts. The course will be conducted exclusively in the target language.

**POR 3421 Review Grammar/Writing II (3).** Examination of grammatical theory; discussion of the modern essay. Practice in the detection and correction of errors in usage. The course will focus on current international events as content for informal talks and compositions.

**POR 3500 Luso-Brazilian Culture (3).** Open to any student who understands Portuguese. The development of Portuguese speaking civilizations, with emphasis on either Portugal or Brazil: history, art, music, daily life, impact on other cultures.

**POR 3930 Special Topics in Language Linguistics (3).** Readings, research, and discussion of topics in Portuguese language or linguistics to be determined by students and instructor.

**POR 4470 Foreign Study: Advanced Language Literature (VAR).** Up to a full semester credit for foreign residence and study/work. (Approval of Department required.)

**POW 4905 Independent Study (1-3).** Project, field experience, readings, or research.

**POW 4930 Special Topics (3).** Independent readings, research, or project.

**PRT 3401 Literature in Translation (3).** Masterpieces of Portuguese literature in English. Comparative use of the original text. Discussion and interpretation.

**RUS 1120 Russian I (5).** Provides training in the acquisition and application of basic language skills.

**RUS 1121 Russian II (5).** Provides training in the acquisition and application of basic language skills.

**RUS 2210 Intermediate Russian (5).** Provides intermediate training in the acquisition and application of basic language skills.

**SPN 1030 Elementary Spanish for Medical Personnel (5).** Conversational elementary Spanish for medical personnel. Recommended for non-native speakers of Spanish who are in nursing or other health-related professions.

**SPN 1120 Spanish I (5).** Course designed specifically for beginning university students with no previous language study. Emphasis on oral Spanish and on acquiring basic language skills.

**SPN 1121 Spanish II (5).** Emphasis on oral Spanish and on acquiring basic language skills. This course completes the lower-division language requirement.

**SPN 2200 Intermediate Spanish (5).** Provides intermediate training in the acquisition and application of basic language skills.

**SPN 3000 Elementary Spanish (3).** Emphasis on oral skills, contemporary language and culture. Content oriented to students with specific professional or leisure interests. This course is not part of a series. No prerequisites.

**SPN 3013 Language Skills for Professional Personnel (1-3).** The course is geared to the special linguistic needs of the community groups (medical, business, technical, etc.).

**SPN 3240 Intermediate Spanish Conversation (1).** This course is designed to help students maintain and increase their ability in the language while unable to continue the regular sequence. May be repeated twice. Prerequisite: SPN 1121 or equivalent.

**SPN 3270 Foreign Study (12).** Intermediate level. One semester full-time credit for foreign residence and study. Individual cases will be evaluated for approval.

**SPN 3301 Review Grammar/Writing I (3).** Practice in contemporary usage through selected readings in culture and civilization. Development of writing and speaking ability in extemporaneous contexts. The course will be conducted exclusively in the target language. For non-native speakers.

**SPN 3302 Review Grammar/Writing II (3).** Examination of grammatical theory; discussion of the modern essay. Practice in the detection and correction of errors in usage. The course will focus on current international events as content for informal talks and composition.

**SPN 3340 Intermediate Spanish for Native Speakers (3).** Improvement of spelling, grammar, vocabulary, reading, writing, and oral skills for Hispanic bilinguals educated in the U.S., with less than two years of formal training in Spanish but whose mother tongue is Spanish. Prerequisite: Ability to understand Spanish.

**SPN 3341 Advanced Spanish for Native Speakers (3).** Improvement of literacy skills through grammar review, composition, and selected readings of representative Hispanic writers, including Cuban, Puerto Rican, and Chicano authors. For U.S. Hispanic bilinguals with at least two years of formal training in Spanish. Prerequisite: SPN 2340 or permission of instructor.

**SPN 3401 Advanced Conversation (3).** Improvement of oral proficiency and listening comprehension skills, correction of accent, vocabulary building. Use of small group conversation, pronunciation tapes, and varied outside readings.

**SPN 3413 Communication Arts (3).** Oral interpretation and dramatic reading. Original and non-original texts will be the content of the course. Study of shared modes of experience and their individual linguistic expression in an acquired language.

**SPN 3440 Spanish Business Composition/ Correspondence (3).** Training in the special writing needs of business: letter-writing, memoranda, brochures, advertising, proposals, declarations, government documents, etc.

**SPN 3520 Spanish American Culture (3).** Introduction to the major artistic and cultural phenomena in Latin America. Art, music, film, and literature will be discussed in their cultural context. Prerequisite: Ability to understand Spanish at advanced level.

**SPN 3702 Applied Linguistics (3).** Examination of available linguistic materials for self-instruction. Problem-solving in syntax and phonetics, through the application of modern/traditional methods. Prerequisite: LIN 3010 or equivalent. (Conducted in Spanish).

**SPN 3733 Introduction to General Linguistics (3).** Examination and synthesis of the concepts and perspectives of major contributions to language theory. (Conducted in Spanish.) Equivalent to LIN 3010.

**SPN 3780 Phonetics (3).** The application of phonetic theory and practice for speech refinement. Study of sound patterns in communication and creative activity. Prerequisite: LIN 3010 or equivalent.

**SPN 3820 Dialectology (3).** Definition and analysis. Problem-solving in dialect classification. Prerequisite: LIN 3010 or equivalent.

**SPN 4470 Foreign Study: Advanced Language Literature (12).** Full semester credit for foreign residence and study/work. (Approval of the Department required.)

**SPN 4500 Spanish Culture (3).** Open to any student who understands the target language. The development of a particular civilization. Emphasis on the evolution of a society, its ideas and its values.

**SPN 4790 Contrastive Phonology (3).** Contrasts in the sound systems of English and Spanish. Prerequisite: LIN 3010 or equivalent.

**SPN 4802 Contrastive Syntax (3).** Contrasts in the grammatical systems of English and Spanish with emphasis on structures with equivalent meanings. Recommended for students of translation and interpretation. Prerequisite: LIN 3010 or permission of the instructor.

**SPN 4822 Hispanic-American Sociolinguistics (3).** Language and society in Latin America. Sociolinguistic theory followed by consideration of specific language problems in Spanish- and Portuguese-speaking areas of the Americas. Prerequisite: LIN 3010 or equivalent.

**SPN 4824 Dialectology of the Spanish Caribbean (3).** Study of varieties of Spanish used in the Caribbean area, including Miami-Cuban Spanish. The course will take historical and contemporary perspectives and will involve research among informants in South Florida.

**SPN 4840 History of the Language (3).** The internal and external history of language development. Examination of model texts from key periods of evolution. Prerequisite: LIN 3010 or equivalent.

**SPN 4905 Independent Study (1-3).** Project, field experience, readings, or research.

**SPN 4930 Special Topics in Linguistics (3).** Provides the opportunity for students and instructor to explore topics not included in the regular course offerings. Content to be determined.

**SPN 4936 Senior Seminar (3).** Topic and approach to be determined by students and instructor.

**SPN 5060 Language for Reading Knowledge (3).** Designed primarily for graduate students who wish to attain proficiency for M.A. or Ph.D. requirements. Open to any student who has no prior knowledge of the language.

**SPN 5061 Language for Reading Knowledge (3).** Emphasis on translation of materials from the student's field of specialization. Prerequisite: SPN 5060 or the equivalent.

**SPN 5525 Spanish American Culture (3).** A graduate survey of the major artistic phenomena in Latin America. Art, music, film, and literature will be discussed in their cultural context. Prerequisite: Graduate standing and permission of the instructor.

**SPN 5565 Studies in Bilingualism (3).** Readings and analysis of bilingual programs and binational goals.

**SPN 5845 History of the Language (3).** Historical development of the Spanish language, primarily from the point of view of internal linguistic change. Spanish as an example of general processes of language development. Prerequisites: LIN 3010 and one other course in Spanish linguistics.

**SPN 5908 Independent Study (1-3).** Project, field experience, readings, or research.

**SPT 3110 Literature in Translation (3).** Masterpieces of Hispanic literature in English. Comparative use of the original text. Discussion and interpretation.

**SPT 3800 Introduction to Translation Skills (3).** Basic written translation into and out of English.

**SPT 3812 Introduction to Oral Translation (3).** Basic public-speaking techniques for sight translation. Beginning exercises in sight translation into and out of English and Spanish.

**SPT 4801 Translation Practica (3).** Translation of media, literary, and scientific texts.

**SPT 4802 Practica in Oral Translation and Interpretation (3).** Sight translation into and out of English. Introduction to the study of terminology. Prerequisite: SPT 3812 or permission of instructor.

**SPT 4803 Practica in Legal Translation (3).** Provides advanced training in

translating most commonly used legal documents in both civil and criminal procedures.

**SPT 4804 Practice in Legal Interpretation (3).** Training in consecutive and simultaneous interpretation of both civil and criminal legal proceedings before Federal and State courts.

**SPT 4805 Translation in Communication Media (3).** Provide insight into the techniques of translation of advertising, public relations and publicity materials to be used in the mass media such as print and broadcasting.

**SPT 4806 Oral Skills for Interpreters (3).** Voice production in sight translation, consecutive and simultaneous interpretation. Vocal projection, enunciation and phonetics, theory and practice. Extensive exercises in vocal control. Use of sound equipment. Prerequisite: SPT 3812.

**SPT 4807 Practica in Business Translation (3).** Business and language translation and the business world. Principles, techniques, and methods of business translation. Extensive practical exercises in translating routine business documents English to Spanish and vice versa. Prerequisite: SPT 3800.

**SPT 4808 Practica in Technological Translation (3).** Language and technology. The translator in the technological world. Principles, techniques, and methods of technological translation. Extensive practical exercises. Prerequisite: SPT 3800.

**SPT 4809 Practica in Medical Translation (3).** Medical language. The translator and the medical world. Principles, techniques and methods of medical translation. Extensive practical exercises in translating routine medical documents English to Spanish and vice versa. Prerequisite: SPT 3800.

**SPT 4813 The Interpreter and Language (3).** The interpreter as a linguistics expert. The stylistic levels of language. Legal jargon and street language in English and Spanish. Dialectal problems. Practical and ethnical problems. Prerequisite: SPT 3812.

**SPT 4820 Computer-Aided Translation (3).** The translating machine and computer-aided translation. Machine operation. Selected applications of computer translating texts from various disciplines. Correction of translated texts with computers. Prerequisites: SPT 3800, CDA 2310, and permission of director of program.

**SPT 4940 Judicial Translation-Interpretation Internship (3).** Students will spend a semester working in state and federal courts under the supervision of a professor, in order to practice in situations in what they have learned. Prerequisites: SPT 3800, SPT 3812, SPT 4801, SPT 4803, SPT 4804, SPT 4806, and SPT 4807.

**SPT 4941 Professional Translation-Interpretation Internship (3).** Students will spend a semester working in state and federal courts under the supervision of a professor, in order to practice in situations in what they have learned. Prerequisites: SPT 3800, SPT 3812, and permission of instructor.

**SPT 5118 Literature in Translation (3).** Masterpieces of world literature. Open to students who are proficient in more than one language.

**SPW 3323 Garcia Lorca's Theatre (3).** Readings from representative plays by Spain's finest dramatist of the 20th century, including his three well-known tragedies and a number of short comic plays. Discussion of such themes as social and individual justice and freedom; passion and repression; and the role of poetry in the theatre.

**SPW 3342 Twentieth Century Spanish Poets (3).** Readings from selected poets of the 20th century, such as Antonio Machado, Miguel Hernandez, Damaso Alonso, and Rafael Alberti. Close examination of the poems representative of these poets, and their contribution to the development of Spanish poetry from the Generation of 1898 to the middle of the 20th century.

**SPW 3371 The Latin American Short Story (3).** Readings from the 19th century authors and such 20th century masters as Borges, Cortazar, Cabrera Infante, Garcia Marquez, and Rulfo. Examination of short-story techniques and of such themes as social satire, the nature of reality, reason, and irrationally.

**SPW 3423 Masterworks of the Golden Age (3).** Readings from selected masterpieces of the Spanish Renaissance and Baroque, such as La Celestina, Lazarillo de Tormes, and the short novels of Cervantes. Emphasis on satire and the representation of such human problems as freedom, poverty, and the rebellion of the individual.

**SPW 3520 Prose and Society (3).** The dynamics of participation and alienation between prose writers and their environment.

**SPW 3604 Don Quijote (3).** A careful reading and discussion of Cervantes' Don Quijote, with particular attention to its multiple meanings in human terms, its innovative contributions to the novel in Europe, and the author's use of irony, characterization, and humor.

**SPW 3720 The Generation of 98 (3).** Based on the works of Azorin, Baroja, Ganivet, Machado, Maetzu, Unamuno, and Valle-Inclan, this course will emphasize the individual thrust each author makes to foster artistic revolution and human regeneration, within a society characterized by abulia and existentialist anxiety.

**SPW 3810 Problems in Reading and Interpretation (3).** The identification and appreciation of techniques for sensitive reading and discussion of literary texts.

**SPW 3820 Introduction to Literature (3).** Close reading and analysis of prose and poetry. Introduction to the methods of literary criticism. Selected readings in international sources.

**SPW 3930 Special Topics (3).** Readings and discussion of literary/linguistic topics to be determined by students and instructor.

**SPW 4152 European Literature in Translation (3).** For students proficient in more than one foreign language. Content and focus to be determined by students and instructor.

**SPW 4263 The Spanish Novel of the Nineteenth Century (3).** Within the context of literature and society, representative Spanish novels of the epoch will be studied. Special attention will be given to Galdos and Clarin.

**SPW 4271 Twentieth-Century Spanish Novel to 1956 (3).** A study of the genre in Spain before and after the Civil War. Emphasis will be on predominant narrative tendencies. Representative authors will be discussed, such as Cela, Laforet, Sender, Matute, Medio, and others.

**SPW 4304 Latin American Theatre (3).** A view of Latin American theatre from the 19th century to the present. Representative works of the most renown dramatists will be examined, with emphasis on the works of Usigili, Triana, Marques Wolff, and Diaz.

**SPW 4324 Contemporary Spanish Drama: Buero Vallejo (3).** Chronological readings from plays written between 1949-1980. Emphasis on dramatic reading. An examination of the evolution of dramatic art in the contexts of censorship and freedom.

**SPW 4334 Golden Age Poetry (3).** Selected readings from the major lyric poets of the 16th and 17th centuries. Special attention to the problems of contemporary readings of classical texts.

**SPW 4343 Poetry of Garcia Lorca (3).** Chronological examination of the major works of Spain's greatest poet. Special attention to the lyric and dramatic features.

**SPW 4351 Spanish American Poetry I (3).** A view of Spanish American poetry from the Pre-Colonial period until 1850. Representative works of the most renown poets will be examined, with emphasis on Ercilla, Sor Juana, Bello, Heredia, and Avellaneda.

**SPW 4352 Spanish American Poetry II (3).** A view of Spanish American poetry from 1850 to the present. Representative works of the important poets will be examined, and special attention will be given to Lezama Lima, Parra, Paz, and Vallejo.

**SPW 4364 The Spanish American Essay (3).** A study of the ideological and intellectual forces that have shaped the Spanish American thought, as expressed in the works of representative authors such as Rodo, Mallea, Martinez Estrada, Paz, Manach, and others.

**SPW 4390 Genre Studies (3).** Examination of a single literary form (e.g. short story, poetry), or the study of interaction between literary types (e.g. novel and drama).

**SPW 4424 Golden Age Drama (3).** Close readings from the finest plays written in Spain's Golden Age by Lope de Vega, Calderon, Tirso, and others, including the Don Juan theme. An examination of theatre as stylized conformity and as protest literature in a highly controlled society.

**SPW 4590 Creative Modes (3).** Discussion of a single mode or a plurality of epoch styles such as classical/baroque, realism/surrealism. The peculiar/common features of expressive media.

**SPW 4930 Special Topics (3).** Independent readings, research, or project.

**SPW 5155 Comparative Studies (3).** Cross-over and distinctiveness in a multi-language problem, period, or aesthetic.

**SPW 5237 The Traditional Spanish American Novel (3).** Study and analysis of the traditional Spanish novel as a form of art, from 19th century Lizardi's El periquillo sarniento, to 1950. The novels and authors studied are representative of 'costumbrismo', 'romanticismo', 'naturalismo', 'modernismo', and 'criollismo'.

**SPW 5277 Twentieth Century Spanish Novel, from 1956 to the Present (3).** Analysis of the Spanish novel from Ferlosio's El Jarama to the present. The perspective will be focused within historical, social, and artistic context. Representative authors such as Cela, Martin Santos, Umbral, Delibes, Benet, Goytisolo, and others will be included.

**SPW 5286 Contemporary Spanish American Novel (3).** A study of the Spanish American Novel from 1950. The course will intensively and extensively focus on the novelists who are best known for their innovations, defining and analyzing the qualities which give originality and newness both in themes and language.

**SPW 5346 Poetry of Jorge Guillen (3).** Selected readings from the five volumes of Aire nuestro. Emphasis on the techniques of close reading and explication. Related selections from Guillen's literary criticism.

**SPW 5358 Graduate Seminar: Prose and Poetry of Jorge Luis Borges' (3).** Close readings of short stories and poetry. Emphasis on Borge's linguistic and cultural pluralism and the interplay of philosophy with fabulation.

**SPW 5359 Graduate Seminar: Poetry of Pablo-Neruda (3).** Chronological examination of the major works of Chile's Nobel Laureate. Related readings from Neruda's Memories. Emphasis on the poet's linguistic and aesthetic innovations.

**SPW 5425 Quevedo: Poetry (3).** Close reading of selected poems by Spain's greatest baroque poet and creator of modern Spanish satire, including poems on love, death, and metaphysical concerns, and a wide range of humorous poems.

**SPW 5426 Quevedo: Prose Satire (3).** Close reading of selected satires in prose by Spain's greatest baroque satirist and creator of modern Spanish satire. Includes Quevedo's picaresque novel El Buscon, and his Suenos, or Visions of Hell.

**SPW 5575 Spanish American Modernism (3).** An in-depth study of prose and poetry of one of the most important periods of Spanish American literature, focusing on Marti, Dario, Najera, Casals, Silva, Valencia, Lugones, and Herrera y Reissig.

**SPW 5934 Special Topics in Language/Literature (3).** Content and objectives to be determined by student and instructor.

## Music

**John Augenblick,** *Associate Professor and Chairperson*
**John Brick,** *Assistant Professor*
**Richard Dunscomb,** *Professor*
**Philip H. Fink,** *Professor*
**Orlando Garcia,** *Assistant Professor*
**Robert Grenier,** *Assistant Professor*
**Clair McElfresh,** *Professor*
**Michael Miles,** *Visiting Instructor*
**Joseph Rohm,** *Associate Professor*
**Miguel Salvador,** *Assistant Professor*
**Stephanie Sorcsek,** *Visiting Instructor*
**Violet Vagramiam-Nishanian,** *Professor*

### Bachelor of Music

A Bachelor of Music degree is offered with an emphasis in one or more of the following areas: Applied Music, Composition, Music History. All entering students must provide evidence of performance ability (vocal or instrumental) through an audition.

### Freshman/Sophomore Admission

Freshman admission requires 19 high school academic units, a 3.0 GPA, and a score of 1,000 on the SAT. Some exceptions may be made for talented students.

### Junior/Senior Admission

Music students at the University come from a wide variety of academic backgrounds from both Florida and other states. Because of this diversity, the Faculty of Music gives three basic preliminary examinations in order to assist the student to eliminate any deficiencies:

1. Music History - consisting of all periods of history.

2. Music Theory - consisting of sight-singing, melodic and harmonic dictation and written harmonization and analysis.

3. Performance Skills - consisting of performing one or more solo works for the faculty during the first week of classes.

To qualify for admission to the program, FIU undergraduates must have met all the lower division requirements including CLAST, completed 60 semester hours, and must be otherwise acceptable into the program.

A grade of 'C' or higher in each course and an overall B average in all courses in the major is required for graduation.

### Music Courses required of all Music Majors in the first two years:

**Theory**

| | | |
|---|---|---|
| MUT 1111 | Music Theory | 3 |
| MUT 1112 | Music Theory II | 3 |
| MUT 2116 | Music Theory III | 3 |
| MUT 2117 | Music Theory IV | 3 |

**Ear Training/Sightsinging**

| | | |
|---|---|---|
| MUT 1221 | Sightsinging I | 1 |
| MUT 1222 | Sightsinging II | 1 |
| MUT 2226 | Sightsinging III | 1 |
| MUT 2227 | Sightsinging IV | 1 |

**Applied Lessons**

Four semesters, 2 credits each semester 8

**Class Piano**

| | | |
|---|---|---|
| MVK 1111 | Class Piano I | 1 |
| MVK 1121 | Class Piano I | 1 |
| MVK 2131 | Class Piano II | 1 |
| MVK 2141 | Class Piano II | 1 |

**Ensembles**

Two credits each semester enrolled in Applied Music (To be determined by advisor) 6

**Recital Attendance** (To be taken each semester enrolled in Applied Music)

| | | |
|---|---|---|
| MUS 1010 | Recital Attendance | 0 |

In addition, all freshmen and sophomore students must fulfill the requirements of the university Core Curriculum or General Education.

### Junior/Senior Year Areas of Emphasis

The following are Junior/Senior Year areas of emphasis for Music students. Nine hours in elective courses outside the department are required by the College. Admission to each area is by faculty approval.

**Area I : Performance** (53)

**Required Courses**

**Theory:** (9)

| | | |
|---|---|---|
| MUT 3401 | Counterpoint | 3 |
| MUT 3611 | Form and Analysis | 3 |
| MUT 4311 | Orchestration | 3 |

**History:** (9)

| | | |
|---|---|---|
| MUH 3211 | Music History Survey I | 3 |
| MUH 3212 | Music History Survey II | 3 |
| MUH 3371 | Twentieth Century Music: Exploration | 3 |

**Ensembles**

Two credits each semester enrolled in Applied Music (To be determined by advisor) 8

**Major Applied**

Four semesters 2 credits each semester 8

**Conducting**

Basic, Intermediate 2

**Recitals:** (2)

| | |
|---|---|
| Junior Recital | 1 |
| Senior Recital | 1 |

**Recital Attendance** (To be taken each semester enrolled in Applied Music)

| | | |
|---|---|---|
| MUS 3040 | Recital Attendance | 0 |

**Electives**

To be determined by advisor 15

**Area II: Composition** (65)

**Required Courses**

**Theory:** (9)

| | | |
|---|---|---|
| MUT 3401 | Counterpoint | 3 |
| MUT 3611 | Form and Analysis | 3 |
| MUT 4311 | Orchestration | 3 |

**History:** (9)

| | | |
|---|---|---|
| MUH 3211 | Music History Survey | 3 |
| MUH 3212 | Music History Survey | 3 |
| MUH 3371 | Twentieth Century Music: Exploration | 3 |

**Ensembles**

Two credits each semester enrolled in Applied Music (including 4 credits of New Music Ensemble) 8

**Conducting**

Basic and Intermediate 2

**Principal Applied**

Four semesters, 2 credits each semester 8

**Composition:**[1] (12)

| | | |
|---|---|---|
| MUC 2221 | Composition I | 2 |
| MUC 2222 | Composition II | 2 |
| MUC 3231 | Composition III | 2 |
| MUC 3232 | Composition IV | 2 |
| MUC 4241 | Composition V | 2 |
| MUC 4242 | Composition VI | 2 |
| MUC 4932 | Composition Forum | 0 |

Completion of 4 semesters of Composition Forum is required for graduation.

**Electronic Music:**[2] (6)

| | | |
|---|---|---|
| MUC 2301 | Electronic Music Lab I | 2 |
| MUC 3302 | Electronic Music Lab II | 2 |
| MUC 4400 | Electronic Music Lab III | 2 |

**Recital Attendance** (To be taken each semester enrolled in Applied Music)

| | | |
|---|---|---|
| MUS 3040 | Recital Attendance | 0 |

**Recitals:**[3] (2)

| | |
|---|---|
| Composition Recital | 1 |
| Senior Recital | 1 |
| Electives | 9 |

[1]Two semesters of MUC 2221 (4 credits) should be taken during the sophomore year.

[2]Electronic Music II is generally offered during the summer (2 credits).

[3]Composition students must present a 45 minute recital of their works and a 30 minute performance recital. A final oral exam administered after the composition recital must also be successfully completed.

**Area III: Music History** (61)

**Required Courses**

**Theory:** (9)

| | | |
|---|---|---|
| MUT 3401 | Counterpoint | 3 |
| MUT 3611 | Form and Analysis | 3 |
| MUT 4311 | Orchestration | 3 |

**History:** (9)

| | | |
|---|---|---|
| MUH 3211 | Music History Survey | 3 |
| MUH 3212 | Music History Survey | 3 |
| MUH 3371 | Twentieth Century Music: Exploration | 3 |

**Ensembles**

Two credits each semester enrolled in Applied Music (To be determined by advisor) 8

**Conducting**

Basic and Intermediate 2

**Principal Applied**

Four semesters 2 credits each semester 8

**Recital Attendance** (To be taken each semester enrolled in Applied Music)

| | | |
|---|---|---|
| MUS 3040 | Recital Attendance | 0 |
| Directed Study[1] | | 8 |
| Research[2] | | 1 |
| Senior Recital | | 1 |
| Electives: (Includes two semesters of a Foreign language) | | 15 |

[1]Musicology students are required to take at least four semesters of Directed Study based on specialized areas of music history under an advisor's supervision.

[2]During the senior year the student is required to lecture for the student body on an independently researched topic of historical significance.

**Music Education**

Certification in Music Education is available through the College of Education.

## Minor in Music

A Minor in music requires 18 credits of music courses to be selected in consult-

ation with the chairperson of the Music Department.

## Course Descriptions

### Definition of Prefixes

HUM-Humanities; MUC-Music: Composition; MUE-Music: Education; MUG-Music: Conducting; MUH-Music: History/Musicology; MUL-Music: Literature; MUM-Music: Commercial; MUN-Music: Ensembles; MUS-Music; MUT-Music: Theory; MVB-Applied Music/Brass; MVK-Applied Music-Keyboard; MVJ-Applied Music/Jazz; MVP-Applied Music/Percussions; MVS-Applied Music/Strings; MVV-Applied Music/Voice; MVW-Applied Music/Woodwinds.

**MUC 2221 Composition I (2).** Creative writing utilizing 20th century compositional techniques in Impressionism, Neoclassicism, Post Webern Serialism, Indeterminacy, Minimalism, Mixed, Multi and Inter media, etc. Prerequisite: MUT 1112. Corequisite: MUT 2116.

**MUC 2222 Composition II (2).** Continuation of MUC 2221. Prerequisite: MUC 2221. Corequisite: MUT 2117.

**MUC 3231 Composition III (2).** A continuation of Composition I to further the development of students compositional abilities through the writing of more evolved works with regard to duration, instrumentation. Prerequisite: MUC 2222.

**MUC 3232 Composition IV (2).** Continuation of MUC 3231. Prerequisite: MUC 3231.

**MUC 4241 Composition V (2).** Continuation of MUC 3232. Prerequisite: MUC 3232.

**MUC 4242 Composition VI (2).** Continuation of MUC 4241. Prerequisite: MUC 4241.

**MUC 2301 Electronic Music Lab I (2).** Exploration of the electronic medium including the history of electronic music, the use of mixers and tape recorders, analog synthesis, digital synthesis and an intro to MIDI. Prerequisite: Music majors or permission of instructor.

**MUC 3302 Electronic Music Lab II (2).** A continuation of Electronic Music Lab I with added emphasis on MIDI applications and the use of samplers, MIDI software and digital processors. Prerequisite: Electronic Music Lab I.

**MUC 4400 Electronic Music Lab III (2).** Special projects in electronic music designed for composition students. Projects include works for electronics and acoustic instruments utilizing the software and components of the electronic studio. (Repeatable 4 times). Prerequisite: Electronic Music Lab II.

**MUC 4932 Composition Forum (0).** Student composers critique each others' work and discuss topic of interest to composers. Required of all students taking Composition II. Prerequisite: Admission to Composition Program.

**MUE 3440C String Techniques (1).** Class instruction of string instruments; tuning and care of instruments; teaching techniques, fingerings, bowings; violin, viola, cello and double bass.

**MUE 3450C Woodwind Techniques (1).** Class instruction of woodwind instruments; tuning and care of instruments. Teaching techniques. Single reed instruments, double reed instruments, and flute. Class one hour, laboratory one hour.

**MUE 3460C Brass Techniques (1).** Class instruction of brass instruments; tuning and care of instruments. Teaching techniques. Piston and valve instruments, french horn, and trombone. Class one hour, laboratory one hour.

**MUE 3470C Percussion Techniques (1).** Class instruction of percussion instruments; sticking techniques; care of instruments; teaching techniques. Drum and mallet instruments. Class one hour, laboratory one hour.

**MUE 5928 Workshop in Music (2).** Applications of materials and techniques in music in a laboratory or field setting.

**MUG 4101 Basic Conducting (1).** A basic conducting course to gain fundamental technique and interpretation. A prerequisite for both advanced instruments and choral conducting.

**MUG 4202 Choral Conducting (1).** With a background in basic theory, and having performed in organizations, the student will develop techniques of group conducting including madrigal, glee, choir, etc. A survey of choral literature will be included. Prerequisite: MUG 4101.

**MUG 4302 Instrumental Conducting (1).** With a background in basic theory, and having performed in organizations, the student will develop a knowledge of baton technique, score reading, and interpretation. Prerequisite: MUG 4101. Corequisite: Orchestra or wind ensemble or both.

**MUG 5105 Advanced Conducting Techniques (1).** An extension of form and analysis, with interpretation both in instrumental and choral conducting. Twentieth century scoring and symbol interpretation will be studied in depth, with actual conducting experience required.

**MUH 1001 Music Appreciation (3).** Lives and creations of great composers in various periods of history. A multi-media course.

**MUH 2116 Evolution of Jazz (3).** A history course that surveys jazz styles from mid-19th century to the present. A sociological and musical look at jazz, the personalities and their experience.

**MUH 3211 Music History Survey (3).** A survey of music from antiquity to 1750. Lectures on historical styles will be supplemented with slides, recordings, and musical analysis. Prerequisite: Core for Music majors or by permission of instructor.

**MUH 3212 Music History Survey (3).** A survey of music from 1750 to the present. Lectures on historical styles will be supplemented with slides, recordings, and musical analysis. Prerequisite: Core for Music majors or by permission of instructor.

**MUH 3371 Twentieth Century Music: Exploration (3).** An exploration of music since 1900. Lectures on style plus demonstrations will be supplemented with recordings and analysis.

**MUH 4680 Music History Seminar I (2).** Emphasizes both historical and theoretical analysis. Scholarly work under faculty direction, develops written skills and research methods. Written project required. Prerequisite: MUH 3211, MUH 3212, and permission of instructor.

**MUH 4681 Music History Seminar II (2).** Emphasizes both historical and theoretical analysis. Scholarly work under faculty direction, develops written skills and research methods. Written project required. Prerequisite: MUH 4680 or permission of instructor.

**MUH 4682 Music History Seminar III (2).** Emphasizes both historical and theoretical analysis. Scholarly work under faculty direction, develops written skills and research methods. Written project required. Prerequisite: MUH 4681.

**MUH 4683 Music History Seminar IV (2).** Emphasizes both historical and theoretical analysis. Scholarly work under faculty direction, develops written skills and research methods. Written project required. Prerequisite: MUH 4682.

**MUH 5375 Twentieth Century Music: 'New Dimensions' (3).** A technical study of music since 1900. Lectures on style plus demonstrations and practical

application will be supplemented with recordings and analysis.

**MUL 4400 Keyboard Literature (3).** Study of solo works for the keyboard from historical beginnings to the present. Performance practices and stylistic analysis will be emphasized, with illustrations of representative works. Prerequisites: MUH 3211, MUH 3212.

**MUL 4500 Symphonic Literature (3).** Survey of symphonic literature from the 17th century to present day. Analysis and illustrations of representative works. Prerequisites: MUH 3211, and MUH 3212.

**MUL 4630 Symphonic/Chamber Vocal Literature (1).** Corequisite with MUL 4500 Symphonic Literature. A practicum surveys Symphonic & Chamber vocal music from 17th Century to present day. Includes selection of personal repertory and ensemble performance.

**MUL 4662 History and Literature of Opera (3).** Chronological survey of opera literature from the 17th century to present day. Analysis and performance of representative works. Prerequisites: MUH 3211, and MUH 3212.

**MUM 1401 Music Calligraphy (3).** The correct procedures for music penmanship, the notation of notes and chords for music parts and scores.

**MUM 3601 Audio Techniques I (3).** Basic sound engineering, including the basic workings of P.A. equipment and the interplay between the various components.

**MUM 3602 Audio Techniques II (3).** Studio recording techniques, microphone placement, taping and mixing.

**MUM 4301 Business of Music (3).** Principles and practices of modern publishing techniques; copyright laws; wholesale and retail distribution of music. Performance rights; agreements and relations between producers directors, performers, writers, personnel managers, and booking agents. Prerequisite: Permission of instructor.

**MUM 4302 Business of Music II (3).** Continuation of principles and practices of modern publishing techniques; copyright laws; wholesale and retail distribution of music. Performance rights; agreements and relations between producer, directors, performers, writers, personnel managers, booking agents. Prerequisite: MUM 4301.

**MUM 4940 Music Internship (VAR).** Practical experience utilizing music theory, composition, and history in the commercial music industry. The precise nature of the work will be determined in consultation with an advisor. Prerequisite: MUM 4302.

**MUN 1100, 4103, 5105 Golden Panther Band (1).** A study and performance of pop, jazz, and rock musical selections for the instrumental medium. Students will demonstrate what they have learned by performing and through individualized playing examinations. Prerequisite: Permission of instructor.

**MUN 1140, 4143, 5145 Symphonic Wind Ensemble (1).** Readings and performances of wind ensemble music from the 18th century to the present. Open to wind and percussion instrumentalists. Prerequisite: Permission of conductor.

**MUN 1210, 4213, 5215 Orchestra (1).** An instrumental ensemble performing works from the symphonic repertory. Prerequisites: Previous experience and permission of conductor.

**MUN 1340, 3343, 5345 Sunblazer Singers (1).** A small ensemble of selected mixed voices performing a repertoire in the modern popular idiom. Miniature contemporary accompaniment will be utilized. Prerequisite: Permission of conductor.

**MUN 1380, 3383, 4380 University Singers (1).** A chorus performing a repertoire primarily from great choral works. Large orchestral accompaniment as well as various instrumental ensembles will be utilized. Prerequisite: Permission of conductor.

**MUN 1430, 3433, 5435 University Brass Choir (1).** A study and performance of literature written for the brass medium (trumpet, horn, trombone, euphonium, and tuba) from the pre-baroque, baroque, classical, romantic and contemporary periods. May be repeated. Prerequisite: Permission of instructor.

**MUN 1460, 3463, 5465 Chamber Music (1).** Small ensemble in the performing of chamber music literature. Prerequisite: Permission of conductor.

**MUN 1710, 3713, 5715 Studio Jazz Ensemble (1).** An ensemble to provide creative professional-level experience in the contemporary popular idiom. Permission of conductor.

**MUN 2440, 4443, 5445 Percussion Ensemble (01).** A study and performance of music literature characteristic of the percussion ensemble. Prerequisite: Permission of instructor.

**MUN 2450, 4453, 5455 Piano Ensemble (1).** The presentation and performance of music literature characteristic of piano and pianos in ensemble.

**MUN 2480, 4483, 5485 Guitar Ensemble (1).** The presentation and performance of music literature characteristic of the Guitar Ensemble. Prerequisite: Permission of conductor.

**MUN 2490, 4493, 5495 New Music Ensemble (1).** A chamber group of varying instrumentation and size performing art music from the 20th century with emphasis on music from the past 20 years. Explores electronics, multimedia works, etc. Prerequisite: Permission of instructor.

**MUN 2510, 4523, 5515 Accompanying (1).** Accompanying instrumental and vocal students in studio and recital situations.

**MUN 2711, 4714, 5716 Jazz Combo Class (1).** Harmonic practice, formal procedures, rhythmic and improvisational practices of jazz performance in the small group. Prerequisites: Permission of conductor.

**MUN 4784, 5785 Jazz Ensemble Rehearsal Techniques (1).** An ensemble that provides its members a creative approach to jazz ensemble rehearsal techniques, literature, improvisation and related materials. Prerequisite: Permission of instructor.

**MUO 1501, 4502, 5505 Opera Workshop (1).** The presentation and performance of music literature indigenous to the opera stage. Prerequisite: Permission of director.

**MUO 3603 Elements of Stage Production (2).** Aspects of technical theatre will be examined such as stage design and lighting, costumes and make-up, stage direction, prop construction, prompting, and Opera Theatre administration.

**MUO 4503 Opera Theatre I (3).** Culmination of opera courses with emphasis on accumulation of repertoire, systematic development of a role, and rehearsal procedures and discipline. Student may perform self-directed scenes. Permission of instructor.

**MUO 4504 Opera Theatre II (3).** Continuation of Opera Theatre I. Student may participate in staged operatic production as performer or technical personnel. Prerequisite MVV 4561, MVV 4451, and MVV 3931 or permission of instructor.

**MUS 3905, MUS 5905 Directed Study (VAR).** Designed to provide areas of exploration and specialization beyond the basic selected study programs, such as electronic music, religious music litera-

ture, sound techniques, etc. Prerequisite: Permission of instructor.

**MUS 1010, MUS 3040 Recital Attendance (0).** Students attend concerts and recitals as a corequisite to applied music. Required of music majors each semester.

**MUS 3910, MUS 4910, MUS 5910 Research (VAR).** Research composition or performance projects, under the guidance and direction of the music faculty. (May be repeated). Prerequisite: Permission of instructor.

**MUS 3949 Cooperative Education in Performing Arts (VAR).** A student majoring in Performing Arts may spend several semesters fully employed in industry or government in a capacity relating to the major.

**MUS 4949 Cooperative Education in Performing Arts (VAR).** A student majoring in Performing Arts may spend several semesters fully employed in industry or government in a capacity relating to the major.

**MUT 1001 Fundamentals of Music (3).** A beginning music theory course in the basic elements of music rhythms, meter notation, key signatures scales, intervals, and triads.

**MUT 1111 Music Theory I (3).** This course is designed to promote and develop comprehensive musicianship in all disciplines of the musical art, analysis, composition, performance, and listening. Corequisite: MUT 1221.

**MUT 1112 Music Theory II (3).** This course is designed to promote and develop comprehensive musicianship in all disciplines of the musical art, analysis, composition, performance, and listening. The second semester is a continuation of Theory I. Prerequisite: MUT 1111, Corequisite: 1222.

**MUT 2116 Music Theory III (3).** Continuation of Freshman Theory. It seeks to promote and further develop comprehensive musicianship in all disciplines of the musical art, analysis, composition, performance, and listening. Prerequisite: MUT 1112. Corequisite: MUT 2226.

**MUT 2117 Music Theory IV (3).** This course further develops those skills acquired in sophomore Theory I. Prerequisite: MUT 2116. Corequisite: MUT 2227.

**MUT 1221 Sightsinging I (1).** Development of Basic Musicianship through aural perception, sightsinging, and ear training exercises. Corequisite: MUT 1111.

**MUT 1222 Sightsinging II (1).** Development of Basic Musicianship through aural perception, sightsinging and ear training exercises. The second semester is a continuation of Sightsinging I. Prerequisite: MUT 1221. Corequisite: MUT 1112.

**MUT 2226 Sightsinging III (1).** Continuation of the Development of Basic Musicianship through aural perception, sightsinging, and ear training exercises. Prerequisite: MUT 1222. Corequisite: MUT 2116.

**MUT 2227 Sightsinging IV (1).** Continuation of the Development of Basic Musicianship through aural perception, sightsinging, and ear training exercises. Prerequisites: MUT 2226, MUT 2116. Corequisite: MUT 2117.

**MUT 3401 Counterpoint (3).** A study of linear writing through species counterpoint. Two and three-part instrumental and vocal counterpoint of the 18th century: Canon, inventions, fugues. Particular emphasis will be placed on formal analysis. Prerequisite: MUT 2117, 2227, or equivalent.

**MUT 3611 Form and Analysis (3).** Study and analysis from the smaller forms of musical composition to multi-movement forms. Prerequisite: MUT 2117, MUT 2227.

**MUT 4311 Orchestration (3).** With a background of basic theory, the student will explore the techniques of writing and arranging for instruments in performing organizations and choral groups. Prerequisite: Prerequisites: MUT 2117 and MUT 2227.

**MUT 4353 Jazz Arranging (3).** This course teaches the fundamental aspects of jazz arranging: instrumentation, transposition, section and ensemble writing, chord voicings, counterpoint, and form and analysis. The performance of an original arrangement is required as a final project. Prerequisite: MUT 4641.

**MUT 4641 Jazz Improvisation I (3).** A beginning course in Jazz improvisation that teaches fundamental aspects, chord structures and extensions, chord scales, melodic patterns, and tunes. Course will involve both theory and practical application. A concert will be held at conclusion of term. Prerequisite: Permission of instructor.

**MUT 4642 Jazz Improvisation II (3).** A follow-up course that both reinforces and extends all material learned in Jazz Improvisation I. Course stresses more complex chord structure, scales, and tunes. A concert will be held at conclusion of the term. Prerequisite: MUT 4641.

**MUT 4643 Jazz Improvisation III (3).** A continuation of Jazz Improvisation II, this course teaches chromatic chords, advanced scales and progressions, patterns, repertoire. Individual and ensemble performance is required as a final project. Prerequisite: MUT 4642.

**MUT 5381 Arranging (3).** A course in practical arranging for the public school teacher, including choral, band, and popular arranging. Prerequisites: MUT 2117 and MUT 2227.

**MVB 1211, 2221, 3231, 4241, 5251 Secondary Applied Trumpet (1).** Individual instruction in applied music on trumpet as a secondary instrument. Prerequisite: Permission of instructor.

**MVB 1212, 2222, 3232, 4242, 5252 Secondary Applied French Horn (1).** Individual instruction in applied music on french horn as a secondary instrument. Prerequisite: Permission of instructor.

**MVB 1213, 2223, 3233, 4243, 5253 Secondary Applied Trombone (1).** Individual instruction in applied music on trombone as a secondary instrument. Prerequisite: Permission of instructor.

**MVB 1214, 2224, 3234, 4244, 5254 Secondary Applied Baritone Horn (1).** Individual instruction in applied music on baritone horn as a secondary instrument. Prerequisite: Permission of instructor.

**MVB 1215, 2225, 3235, 4245, 5255 Secondary Applied Tuba (1).** Individual instruction in applied music on tuba as a secondary instrument. Prerequisite: Permission of instructor.

**MVB 1311, 2321, 3331, 4341, 5351 Principal Applied Trumpet (1-2).** Individual instruction in applied music on trumpet as a principal instrument. Music majors only.

**MVB 1312, 2322, 3332, 4342, 5352 Principal Applied French Horn (1-2).** Individual instruction in applied music on french horn as a principal instrument. Music majors only.

**MVB 1313, 2323, 3333, 4343, 5353 Principal Applied Trombone (1-2).** Individual instruction in applied music on applied trombone as a principal instrument. Music majors only.

**MVB 1314, 2324, 3334, 4344, 5354 Principal Applied Baritone Horn (1-2).** Individual instruction in applied music on baritone horn as a principal instrument. Music majors only.

**MVB 1315, 2325, 3335, 4345, 5355 Applied Tuba (1-2).** Individual instruction in applied music on tuba as a principal instrument. Music majors only.

**MVB 1411, 2421, 3431, 4441, 5451 Major Applied Trumpet (1-2).** Individual instruction in applied music on trumpet as a major instrument. Music majors only.

**MVB 1412, 2422, 3432, 4442, 5452 Major Applied French Horn (1-2).** Individual instruction in applied music on french horn as a major instrument. Music majors only.

**MVB 1413, 2423, 3433, 4443, 5453 Major Applied Trombone (1-2).** Individual instruction in applied music on trombone as a major instrument. Music majors only.

**MVB 1414, 2424, 3434, 4444, 5454 Major Applied Baritone Horn (1-2).** Individual instruction in applied music on baritone horn as a major instrument. Music majors only.

**MVB 1415, 2425, 3435, 4445, 5455 Major Applied Tuba (1-2).** Individual instruction in applied music on tuba as a major instrument. Music majors only.

**MVB 3970 Junior Recital - Brass (1).** All music performance majors must present, during their junior year, at least one half of a public recital, and pass an oral examination on the music programmed. See areas of emphasis for specific requirements.

**MVB 4971 Senior Recital - Brass (1).** All music majors must present, before graduation, at least one half (full recital performance for majors) of a public recital, and pass an oral examination on the music programmed. See areas of emphasis for specific requirements.

**MVJ 1210, 2220, 3230, 4240, 5250 Secondary Jazz Piano (1).** Individual instruction in applied jazz music on piano. Prerequisite: Preceding course in sequence or permission of instructor.

**MVJ 1213, 2223, 3233, 4243, 5253 Secondary Jazz Guitar (1).** Individual instruction in applied jazz music on guitar. Prerequisite: Preceding course in sequence or permission of instructor.

**MVJ 1214, 2224, 3234, 4244, 5254 Secondary Jazz Electric Bass (1).** Individual instruction in applied jazz music on electronic bass. Prerequisite: Preceding course in sequence or permission of instructor.

**MVJ 1215, 2225, 3235, 4245, 5255 Secondary Jazz Fluta (1).** Individual instruction in applied jazz music on flute. Prerequisite: Preceding course in sequence or permission of instructor.

**MVJ 1216, 2226, 3236, 4246, 5256 Secondary Jazz Saxophone (1).** Individual instruction in applied jazz music on saxophone. Prerequisite: Preceding course in sequence or permission of instructor.

**MVJ 1217, 2227, 3237, 4247, 5257 Secondary Jazz Trumpet (1).** Individual instruction in applied jazz music on trumpet. Prerequisite: Preceding course in sequence or permission of instructor.

**MVJ 1218, 2228, 3238, 4248, 5258 Secondary Jazz Trombone (1).** Individual instruction in applied jazz music on trombone. Prerequisite: Preceding course in sequence or permission of instructor.

**MVJ 1219, 2229, 3239, 4249, 5259 Secondary Jazz Percussion (1).** Individual instruction in applied jazz music on percussion. Prerequisite: Preceding course in sequence or permission of instructor.

**MVJ 1313, 2323, 3333, 4343, 5353 Principal Jazz Guitar (2).** Individual instruction in applied jazz music on guitar. Prerequisite: Preceding course in sequence or permission of instructor.

**MVJ 1314, 2324, 3334, 4344, 5354 Principal Jazz Electric Bass (2).** Individual instruction in applied jazz music on electronic bass. Prerequisite: Preceding course in sequence or permission of instructor.

**MVJ 4971 Senior Recital - Jazz (1).** All music majors must present, before graduation, at least one half (full recital performance major) of a public recital, and pass an oral examination on the music programmed. See areas of emphasis for specific requirements.

**MVK 1111 Class Piano I (1).** A course designed to teach piano skills and competencies to non-piano majors. This is a four-semester sequence for music majors. This course includes: keyboard familiarization, finger exercises and techniques, transposing, and easy literature. Prerequisite: None.

**MVK 1121 Class Piano II (1).** A continuation of Class Piano I, MVK 1111. Prerequisite: MVK 1111.

**MVK 2131 Class Piano III (1).** A continuation of Class Piano II. The course includes continued work in finger technique, scales and fingering, transposing, simple accompaniments to folk songs, sight reading cadences, and simple literature. Prerequisite: MVK 1121.

**MVK 2141 Class Piano IV (1).** A continuation of Class Piano III. Prerequisite: MVK 2131.

**MVK 1211, 2221, 3231, 4241, 5251 Secondary Applied Piano (1).** Individual instruction in applied music on piano as a secondary instrument. Prerequisite: Permission of instructor.

**MVK 1213, 2223, 3233, 4243, 5253 Secondary Applied Organ (1).** Individual instruction in applied music on organ as a secondary instrument. Prerequisite: Permission of instructor.

**MVK 1311, 2321, 3331, 4341, 5351 Principal Applied Piano (1-2).** Individual instruction in applied music on piano as a principal instrument. Music majors only.

**MVK 1313, 2323, 3333, 4343, 5353 Principal Applied Organ (1-2).** Individual instruction in applied music on organ as a principal instrument. Music majors only.

**MVK 1411, 2421, 3431, 4441, 5451 Major Applied Piano (1-2).** Individual instruction in applied music on piano as a major instrument. Music majors only.

**MVK 1413, 2423, 3433, 4443, 5453 Major Applied Organ (1-2).** Individual instruction in applied music on organ as a major instrument. Music majors only.

**MVK 3970 Junior Recital - Keyboard (1).** All music performance majors must present, during their junior year, at least one half of a public recital, and pass an oral examination on the music programmed. See areas of emphasis for specific requirements.

**MVK 4971 Senior Recital - Keyboard (1).** All music majors must present, before graduation, at least one half (full recital performance major) of a public recital, and pass an oral examination on the music programmed. See areas of emphasis for specific requirements.

**MVP 1211, 2221, 3231, 4241, 5251 Secondary Applied Percussion (1).** Individual instruction in applied music on percussion as a secondary instrument. Prerequisite: Permission of instructor.

**MVP 1311, 2321, 3331, 4341, 5351 Principal Applied Percussion (1-2).** Individual instruction in applied music on percussion as a principal instrument. Music majors only.

**MVP 1411, 2421, 3431, 4441, 5451 Major Applied Percussion (1-2).** Individual instruction in applied music on percussion as a major instrument. Music majors only.

**MVP 3970 Junior Recital - Percussion (1).** All music performance majors must present, during their junior year, at least one half of a public recital, and pass an

oral examination on the music programmed. See areas of emphasis for specific requirements.

**MVP 4971 Senior Recital - Percussion (1).** All music majors must present, before graduation, at least one half (full recital performance major) of a public recital, and pass an oral examination on the music programmed. See areas of emphasis for specific requirements.

**MVS 1116 Guitar Skills (1).** Emphasis on music reading and elementary techniques. Prerequisite: Permission of instructor.

**MVS 2226 Intermediate Guitar Skills (1).** Emphasis on techniques and styles such as calypso, folk, blues, classical, and jazz. Open to all FIU students. Prerequisite: MVS 1116.

**MVS 1211, 2221, 3231, 4241, 5251 Secondary Applied Violin (1).** Individual instruction in applied music on violin as a secondary instrument. Prerequisite: Permission of instructor.

**MVS 1212, 2222, 3232, 4242, 5252 Secondary Applied Viola (1).** Individual instruction in applied music on viola as a secondary instrument. Prerequisite: Permission of instructor.

**MVS 1213, 2223, 3233, 4243, 5253 Secondary Applied Cello (1).** Individual instruction in applied music on cello as a secondary instrument. Prerequisite: Permission of instructor.

**MVS 1214, 2224, 3234, 4244, 5254 Secondary Applied Double Bass (1).** Individual instruction in applied music on double bass as a secondary instrument. Prerequisite: Permission of instructor.

**MVS 1215, 2225, 3235, 4245, 5255 Secondary Applied Harp (1).** Individual instruction in applied music on harp as a secondary instrument. Prerequisite: Permission of instructor.

**MVS 1216, 2226, 3236, 4246, 5256 Secondary Applied Guitar (1).** Individual instruction in applied music on guitar as a secondary instrument. Prerequisite: Permission of instructor.

**MVS 1311, 2321, 3331, 4341, 5351 Principal Applied Violin (1-2).** Individual instruction in applied music on violin as a principal instrument. Music majors only.

**MVS 1312, 2322, 3332, 4342, 5352 Principal Applied Viola (1-2).** Individual instruction in applied music on viola as a principal instrument. Music majors only.

**MVS 1313, 2323, 3333, 4343, 5353 Principal Applied Cello (1-2).** Individual instruction in applied music on cello as a principal instrument. Music majors only.

**MVS 1314, 2324, 3334, 4344, 5354 Principal Applied Double Brass (1-2).** Individual instruction in applied music on double brass as a principal instrument. Music majors only.

**MVS 1315, 2325, 3335, 4345, 5355 Principal Applied Harp (1-2).** Individual instruction in applied music on harp as a principal instrument. Music majors only.

**MVS 1316, 2326, 3336, 4346, 5356 Principal Applied Guitar (1-2).** Individual instruction in applied music on guitar as a principal instrument. Music majors only.

**MVS 1411, 2421, 3431, 4441, 5451 Major Applied Violin (1-2).** Individual instruction in applied music on violin as a major instrument. Music majors only.

**MVS 1412, 2422, 3432, 4442, 5452 Major Applied Viola (1-2).** Individual instruction in applied music on viola as a major instrument. Music majors only.

**MVS 1413, 2423, 3433, 4443, 5453 Major Applied Cello (1-2).** Individual instruction in applied music on cello as a major instrument. Music majors only.

**MVS 1414, 2424, 3434, 4444, 5454 Major Applied Double Brass (1-2).** Individual instruction in applied music on double brass as a major instrument. Music majors only.

**MVS 1415, 2425, 3435, 4445, 5455 Major Applied Harp (1-2).** Individual instruction in applied music on harp as a major instrument. Music majors only.

**MVS 1416, 2426, 3436, 4446, 5456 Major Applied Guitar (1-2).** Individual instruction in applied music on guitar as a major instrument. Music majors only.

**MVS 3970 Junior Recital - String (1).** All music performance majors must present, during their junior year, at least one half of a public recital, and pass an oral examination on the music programmed. See areas of emphasis for specific requirements.

**MVS 4971 Senior Recital - String (1).** All music majors must present, before graduation, at least one half (full recital performance major) of a public recital, and pass an oral examination on the music programmed. See areas of emphasis for specific requirements.

**MVV 1111 Voice Class (1).** Class instruction on voice designed to help the student in developing performance skills and increased musical knowledge. Prerequisite: Permission of instructor.

**MVV 2121 Intermediate Voice Class (1).** Emphasis on sightsinging, tonal production, interpretation, and other vocal exercises. Particular attention is paid to vocal and acting improvisation. Prerequisite: MVV 1111.

**MVV 1211, 2221, 3231, 4241, 5251 Secondary Voice (1).** Individual instruction in applied music on voice as a secondary instrument. Prerequisite: Permission of instructor.

**MVV 1311, 2321, 3331, 4341, 5351 Principal Applied Voice (1-2).** Individual instruction in applied music on trumpet as a principal instrument. Music majors only.

**MVV 1411, 2421, 3431, 4441, 5451 Major Applied Voice (1-2).** Individual instruction in applied music on voice as a major instrument. Music majors only.

**MVV 3630 Vocal Pedagogy (1).** Research into various philosophies of vocal pedagogy with emphasis on the science of acoustics, anatomy, terminology, psychological factors which apply to the art of singing.

**MVV 3970 Junior Recital - Voice (1).** All music performance majors must present, during their junior year, at least one half of a public recital, and pass an oral examination on the music programmed. See areas of emphasis for specific requirements.

**MVV 4971 Senior Recital - Voice (1).** All music majors must present, before graduation, at least one half (full recital performance major) of a public recital, and pass an oral examination on the music programmed. See areas of emphasis for specific requirements.

**MVV 4551 Opera History Practicum (2).** A performance course corequisite with History of Opera: MUL 4662 with emphasis on historical development and differentiation of operatic styles through characterization and musical interpretation. Includes ensemble experience.

**MVW 1211, 2221, 3231, 4241, 5251 Secondary Applied Flute (1).** Individual instruction in applied music on flute as a secondary instrument. Prerequisite: Permission of instructor.

**MVW 1212, 2222, 3232, 4242, 5252 Secondary Applied Oboe (1).** Individual instruction in applied music on oboe as a secondary instrument. Prerequisite: Permission of instructor.

**MVW 1213, 2223, 3233, 4243, 5253 Secondary Applied Clarinet (1).** Individual instruction in applied music on clarinet as a secondary instrument. Prerequisite: Permission of instructor.

**MVW 1214, 2224, 3234, 4244, 5254 Secondary Applied Bassoon (1).** Individual instruction in applied music on bassoon as a secondary instrument. Prerequisite: Permission of instructor.

**MVW 1215, 2225, 3235, 4245, 5255 Secondary Applied Saxophone (1).** Individual instruction in applied music on saxophone as a secondary instrument. Prerequisite: Permission of instructor.

**MVW 1311, 2321, 3331, 4341, 5351 Principal Applied Flute (1-2).** Individual instruction in applied music on flute as a principal instrument. Music majors only.

**MVW 1312, 2322, 3332, 4342, 5352 Principal Applied Oboe (1-2).** Individual instruction in applied music on oboe as a principal instrument. Music majors only.

**MVW 1313, 2323, 3333, 4343, 5353 Principal Applied Clarinet (1-2).** Individual instruction in applied music on clarinet as a principal instrument. Music majors only.

**MVW 1314, 2324, 3334, 4344, 5354 Principal Applied Bassoon (1-2).** Individual instruction in applied music on bassoon as a principal instrument. Music majors only.

**MVW 1315, 2325, 3335, 4345, 5355 Principal Applied Saxophone (1-2).** Individual instruction in applied music on saxophone as a principal instrument. Music majors only.

**MVW 1411, 2421, 3431, 4441, 5451 Major Applied Flute (1-2).** Individual instruction in applied music on flute as a major instrument. Music majors only.

**MVW 1412, 2422, 3432, 4442, 5452 Major Applied Oboe (1-2).** Individual instruction in applied music on oboe as a major instrument. Music majors only.

**MVW 1413, 2423, 3433, 4443, 5453 Major Applied Clarinet (1-2).** Individual instruction in applied music on clarinet as a major instrument. Music majors only.

**MVW 1414, 2424, 3434, 4444, 5454 Major Applied Bassoon (1-2).** Individual instruction in applied music on bassoon as a major instrument. Music majors only.

**MVW 1415, 2425, 3435, 4445, 5455 Major Applied Saxophone (1-2).** Individual instruction in applied music on saxophone as a major instrument. Music majors only.

**MVW 3970 Junior Recital - Woodwind (1).** All music performance majors must present, during their junior year, at least one half of a public recital, and pass an oral examination on the music programmed. See areas of emphasis for specific requirements.

**MVW 4971 Senior Recital - Woodwind (1).** All music majors must present, before graduation, at least one half (full recital performance major) of a public recital, and pass an oral examination on the music programmed. See areas of emphasis for specific requirements.

# Philosophy

**Bruce Hauptli,** *Associate Professor and Chairperson, Department of Philosophy and Religion*
**Michelle Beer,** *Associate Professor*
**Bongkil Chung,** *Associate* Professor
**Paul Draper,** *Assistant Professor*
**Kenneth Henley,** *Associate Professor*
**George Kovacs,** *Professor*
**Kenneth Rogerson,** *Associate Professor*
**Paul Warren,** *Assistant Professor*

## Bachelor of Arts in Philosophy

Philosophy is a program in the Department of Philosophy and Religion.

### Lower Division Preparation

#### Recommended Courses

PHI 2100, Introduction to Logic and other courses in Philosophy and Religion.

To qualify for admission to the program, FIU undergraduates must have met all the lower division requirements including CLAST, completed 60 semester hours, and must be otherwise acceptable into the program.

**Upper Division Program:** (60 semester hours)

#### Required Areas

| | |
|---|---|
| Epistemology/Metaphysics | 9 |
| Value Theory | 6 |
| Symbolic Logic | 3 |
| History of Philosophy | 6 |
| Philosophy Electives | 9 |
| Total Required Hours: | 33 |
| *General Electives | 27 |

*The College of Arts and Sciences requires for the bachelor's degree that a student take at least 9 hours outside the major discipline, of which 6 hours must be taken outside the major department. PHI 2011 Philosophical Analysis, PHI 2100 Introduction to Logic, and PHI 3636 Professional Ethics may not be used to fulfill the requirement of 9 elective hours in the philosophy program.

*Remarks:* A detailed description of the Philosophy Program is contained in a brochure available at the Department of Philosophy and Religion. Students should consult the brochure for specific requirements of the major program. Students select their required courses in philosophy with the approval of a faculty member of the Department.

Students are also encouraged to consider a dual major, and thus simultaneously to meet the requirements of two academic majors.

The Department offers many of its courses at the North Miami Campus and participates in the Humanities Major course offerings. For further information concerning these courses consult the Department.

## Minor in Philosophy

A student majoring in another academic discipline can earn an academic minor in philosophy by taking any four courses in philosophy (excluding PHI 2011, PHI 2100, PHI 3636).

## Course Descriptions

#### Definition of Prefixes

GRE-Ancient Greek; PHH-Philosophy, History of; PHI-Philosophy; PHM-Philosophy of Man and Society; PHP-Philosophers and Schools.

**GRE 3050 Introduction to Ancient Greek (3).** This course introduces the Greek language of Plato, the New Testament, and other works of the ancient period. Its goal is to enhance the understanding of translated texts and to prepare for more advanced study of Greek. A portion of the Gospel of John will be studied in class.

**PHH 3042 Latin American Philosophy (3).** This course will examine the development of Latin American thought, with particular attention to the 19th and 20th centuries. It will consider the traditions and initiatives of prominent Latin American philosophers in the light of problems such as personal and cultural identity.

**PHH 3100 Ancient Philosophy (3).** The basic concerns and teachings of representative philosophers and schools of thought, particularly in the Greek and Roman cultural settings, and linkages to their past and future are emphasized in this course.

**PHH 3200 Medieval Philosophy (3).** The basic concerns and teachings of representative philosophers and schools of thought in the cultural settings of the Middle Ages, and linkages to their past and future are emphasized in this course.

**PHH 3420 Early Modern Philosophy (3).** The basic concerns and teachings of representative philosophers and schools of thought in the period from the Renaissance to Kant and the linkages to their past and future are emphasized in this course.

**PHH 3440 Late Modern Philosophy (3).** The basic concerns and teachings of representative philosophers and schools of thought in the period from Kant to Nietzsche and the linkages to their past and future are emphasized in this course.

**PHH 3700 American Philosophy (3).** This course will examine the development of American philosophical thought, with particular attention to the 19th and 20th centuries. It will consider the traditions and initiatives of the prominent American philosophers, in the light of problems such as the relationship between theory and practice.

**PHH 3840 Indian Philosophy (3).** Metaphysical, epistemological and ethical theories within such major Indian philosophical systems as philosophical Buddhism, Jainism, Samkhya dualism, and Vedanta transcendentalism are examined.

**PHH 4600 Twentieth Century Philosophy (3).** The basic concerns and teachings of representative philosophers and schools of thought in the cultural settings of the present century, and linkages to past and emerging generations are emphasized in this course.

**PHH 4930 A Major Philosopher (3).** This course will examine in detail the works of a major figure in the history of philosophy. Prerequisite: Permission of instructor. Course may be repeated on a different philosopher.

**PHI 2011 Philosophical Analysis (3).** This course introduces both the tools of philosophical thinking and some of their applications to fundamental topics such as knowledge, value, meaning, and human society.

**PHI 2100 Introduction to Logic (3).** This introductory course in logical thinking and argumentation will treat both practical and theoretical approaches to understanding human communications and solving problems. Students will be introduced to inductive and deductive logic, fallacies, and the role of logic in scientific explanation and popular expression.

**PHI 3101 Philosophical Logic (3).** This course studies the propositional and predicate calculi and such topics as necessary truth, entailment, the ontological implications of logic, and the justification of deduction and induction.

**PHI 3300 Epistemology (3).** The viewpoints of various philosophers and schools of thought regarding types of knowledge, certitude, and creativity are the main emphases of this introductory course. The meaning of truth and truthfulness is analyzed from both the classical and the contemporary perspectives.

**PHI 3320 Philosophy of Mind (3).** An inquiry into the concept of mind and subsidiary concepts such as sensation, perception, desire, emotion, intention, volition, imagination, and intellect. The course will address the problem of the relation of mind and body and such topics as the concept of a person, the nature of intentional action, and the nature of consciousness.

**PHI 3400 Philosophy of Science (3).** The philosophic background of scientific method will be examined. Attention will be given to the philosophical consequences of conceptual change in the sciences. Such topics as the growth and unity of science, explanation and prediction, and the role of science in society will be explored.

**PHI 3420 Philosophy of Social Science (3).** An inquiry into philosophical questions raised by the social sciences. Topics include forms of social explanation, the nature of rationality, and the status of values in social science.

**PHI 3500 Metaphysics (3).** This introductory course examines basic metaphysical questions regarding the nature of reality, as well as the meaning of these questions for the relationship of persons with their world. Fundamental texts from classical and contemporary philosophers will be considered.

**PHI 3600 Ethics (3).** What is intrinsically good? What ought one to do? How are moral claims justified? Competing views of major philosophers are considered.

**PHI 3636 Professional Ethics (3).** This course will examine the role of ethics in the professions. The focus will be on the moral issues arising in the professions with the aim of developing the analytical skills required to address such problems.

**PHI 3700 Philosophy of Religion (3).** This course investigates whether or not religious beliefs can be rationally justified. Such topics as the nature of God, the problem of evil, religious experience, and the relationship of faith to reason will be explored.

**PHI 3762 Eastern Philosophical and Religious Thought (3).** This introductory course examines the development of philosophical and religious thought in the East from ancient to modern times. Hinduism, Buddhism, Confucianism, Taoism, and other major viewpoints will be considered, in themselves and in comparison with Western forms of thought.

**PHI 3800 Aesthetics (3).** An introduction to problems in aesthetics, with emphasis on those problems which are especially relevant to appreciation and criticism in the arts. Typical problems include the relation between form and content, truth and falsity in art, the nature of emotion in art and of the aesthetic response, as well as the nature of art itself. This course will include a study of selections from the writings of major thinkers and the consideration of those works of art which are relevant to this study.

**PHI 4130 Symbolic Logic (3).** This course provides an introduction to symbolic logic. Emphasis is upon both the formal techniques of analysis of argument and upon the theoretical aspects of formal logic.

**PHI 4221 Philosophy of Language (3).** This course examines the nature and structure of language from various philosophical perspectives. It includes an analysis of such themes as language and culture, language and thought, and the origin of language.

**PHI 4222 Philosophy of Dialogue (3).** This course examines the meaning, the foundations, the limitations of dialogue, and the dialogical structure of expression and human relationships based on the philosophy of Martin Buber. It includes a philosophical analysis of the dialogical principle and the application of its insights to the problems of human living and knowing.

**PHI 4321 Topics in the Philosophy of Mind (3).** This course will examine in detail selected issues in the philosophy of mind. Possible topics include the nature and value of the passions, self and self-deception, theory of action, etc. May be repeated. Prerequisite: Instructor's permission or PHI 3320.

**PHI 4630 Contemporary Ethical Issues (3).** After a review of basic questions regarding ethics, this course considers special ethical problems in contemporary society from the perspective of one or more philosophers or systems of ethics. Topics will be selected and announced in advance.

**PHI 4633 Biomedical Ethics (3).** After examining the foundations of ethics, this course will consider the human and ethical dimensions of current issues in the life sciences, such as the meaning of human living and suffering, ethics of genetic control, death and dying, personal responsibility in the medical and counseling professions.

**PHI 4882 Philosophy in Literature (3).** Philosophical implications of selected works and the impact of philosophical concepts such as the self, death, identity, alienation, responsibility, freedom, and the absurd.

**PHI 4910 Independent Research (1-6).** Topics will be selected to meet the academic needs of the individual student. Prerequisite: Permission of instructor.

**PHI 4930 Special Topics (3).** In-depth study of topics of special interest in philosophy.

**PHI 4935 Philosophy Seminar (3).** This seminar is designed for majors and other qualified students approved by the Department, and will be guided by one or more faculty members. The specific topic will be selected and announced in advance. The number of participants will be limited.

**PHI 5934 Special Topics (3).** Topics will be selected to meet the academic needs of groups of students.

**PHM 3040 Philosophical Anthropology (3).** This course attempts to interpret philosophically scientific perspectives concerning the nature of man and of the human condition. It seeks to elucidate the basic qualities that make man what he is and distinguish him from other beings.

**PHM 3200 Social and Political Philosophy (3).** The nature of society and the state, authority of society and the state over the individual, political obligation, legitimacy of government, and idea of social contract are considered.

**PHM 3500 Philosophy of History (3).** After exploring the definitions, dimensions and interrelations of philosophy and history, students will examine major philosophies of history. The social responsibility of the historical narrative and the philosophical assumptions of historiographies will be discussed.

**PHM 4020 Love and Sexuality (3).** This course analyzes the nature and meaning of love and sexuality, and studies the basic problems in human sexual living, such as love and the man-woman relationship, the formation of sexual union, and attitudes toward love and sexuality in contemporary society.

**PHM 4050 Philosophy of Death (3).** This course analyzes the meaning of death and man's attitude towards death and the dying. It examines how philosophy can share in the new confrontation between man and his death, and shows the ways philosophical thinking contributes to the discovery of an authentic attitude towards the phenomenon of death as part of human living.

**PHM 4123 Philosophy and Feminism (3).** A conceptual analysis of alternative feminist views. Topics include the goals of the feminist movement, sexist theories on "women's nature," sexual stereotypes and androgyny, the nature of oppression, sexism, and racism.

**PHM 4400 Philosophy of Law (3).** After an analysis of the nature of law and judicial reasoning in the light of fundamental alternative interpretations, basic topics of legal philosophy will be considered, such as freedom and rights, responsibility and punishment, rule of law and civil disobedience, legality and justice.

**PHP 3840 Chinese and Japanese Philosophy (3).** Metaphysical and ethical theories of the three main philosophical systems of China, namely, Classical and neo-Confucianism, Taoism, and Chinese Buddhism are examined. For Japanese philosophy, Shintoism is included.

**PHP 4510 Marxism (3).** This course examines the philosophic insights of Marx and the main trends (anthropological, social, existential) in contemporary Marxism. It includes an analysis of the Marxist interpretation of alienation, work, and human authenticity.

**PHP 4782 Phenomenology (3).** This course analyzes the method, the basic philosophical insights and the applications of 20th century phenomenology. It includes the phenomenological analysis of knowing as well as basic questions regarding the nature of reality together with the study of fundamental texts from Husserl, Heidegger, and Merleau-Ponty.

**PHP 4784 Analytic Philosophy (3).** This course examines the 20th century Anglo-American tradition of approaching philosophic problems by the methods of linguistic analysis. It will include study of techniques of linguistic analysis and an evaluation of their adequacy in dealing with meaning and truth, the mind-body problem, and free will.

**PHP 4786 Existentialism (3).** This course examines the origin, basic philosophical insights, and influence of the mainstreams of modern existentialism. It includes the study of fundamental texts of Kierkegaard, Nietzsche, Sartre, Jaspers, and Camus.

# Physics

**Richard A. Bone,** *Associate Professor and Chairperson*
**Yesim Darici,** *Assistant Professor*
**Rudolf Fiebig,** *Associate Professor*
**Bernard Gerstman,** *Associate Professor*
**Kenneth Hardy,** *Professor*
**Wai Leung,** *Assistant Professor*
**Oren Maxwell,** *Associate Professor*
**Stephan L. Mintz,** *Professor*
**John W. Sheldon,** *Professor*
**Walter van Hamme,** *Assistant Professor*
**Xuewen Wang,** *Assistant Professor*
**James R. Webb,** *Assistant Professor*

## Bachelor of Science

This program prepares students for careers as professional physicists in industry, government, or graduate study in physics, engineering, or material science. It also prepares students for teaching careers. Students interested in teacher certification should contact the College of Education.

### Lower Division Preparation

#### Required Courses

Algebra and trigonometry (advanced high school courses in algebra and trigonometry are acceptable); one year of general chemistry, differential and integral calculus, and physics with calculus including lab. These courses may be taken at the University if not completed at the lower division.

To qualify for admission to the program, FIU undergraduates must have met all the lower division requirements including CLAST, completed 60 semester hours, and must be otherwise acceptable into the program.

#### Upper Division Program (60)

| | | |
|---|---|---|
| PHY 3123, | PHY 3124 Modern Physics | 6 |
| PHY 3503 | Thermodynamics | 3 |
| PHY 4221, | PHY 4222 Mechanics | 6 |

| | | |
|---|---|---|
| PHY 4323, | PHY 4324 Electromagnetism | 6 |
| PHY 4604, | PHY 4605 Quantum Mechanics | 6 |
| PHY 4810L, | Senior Physics Lab | 3 |
| PHY 4905, | PHY 4906, PHY 4907 Independent Study | 3 |
| Approved electives in experimental or theoretical physics | | 6 |
| MAC 3313 | Multivariable Calculus | 3 |
| MAP 3302 | Differential Equations | 3 |
| Electives (Physics or Non-Physics) | | 15 |

## Minor in Physics

This program is designed for the students who desire additional capabilities in physics beyond the basic sequence. This program is especially recommended for chemistry, mathematics, and engineering/technology majors.

| | | |
|---|---|---|
| PHY 3048, | PHY 3049 Physics with Calculus | 10 |
| PHY 3048L, | PHY 3049L Physics with Calculus Lab | 2 |
| PHY 3123, | PHY 3124 Modern Physics | 6 |
| Additional approved courses | | 6 |

### Cooperative Education

Students seeking the baccalaureate degree in physics may also take part in the Cooperative Education Program conducted in conjunction with Career Planning & Placement. The student spends several semesters fully employed in an industrial or governmental physics laboratory. For further information consult the Department of Physics or Career Planning & Placement.

## Course Descriptions

### Definition of Prefixes

AST-Astronomy; PHS-Physics/Specialized; PHY-Physics; PHZ-Physics; PSC-Physical Sciences; ENU-Nuclear Engineering.

**AST 2100 Solar System Astronomy (3).** General principles of Astronomy with emphasis on the structure and evolution of the Solar System, the laws of planetary motion, and the physical aspects of the sun, planets, and interplanetary debris. Prerequisites: College Algebra and Geometry.

**AST 2100L Solar System Astronomy Laboratory (1).** Laboratory section of AST 2100. Outdoor observing of the moon, planets and indoor exercises including celestial positions and time, the moon's orbit, planetary motions, comparative planetology. Corequisite: AST 2100.

**AST 2201 Stellar Astronomy (3).** General principles of Astronomy with emphasis on the structure and evolution of stars, stellar systems, galaxies and the universe. Topics include stellar birth and death, neutron stars and black holes, galactic distances and the expansion of the universe. Prerequisites: College Algebra and Geometry.

**AST 2201L Stellar Astronomy Laboratory (1).** Laboratory section of AST 2201. Outdoor observing of stars, constellations, binary and variable stars, star clusters, nebulae and indoor exercises including radiative properties of the stars, spectra, stellar and galactic distances, Hubble's Law. Corequisite: AST 2201.

**AST 3213 Modern Astrophysics (3).** An introduction to the structure of stars and galaxies and the evolution of the universe as a whole. Topics will include atomic spectra, stellar classifications, galactic structure, and cosmology. Prerequisites: PHY 3048, 3049.

**AST 5214 Stellar Astrophysics (3)** Topics in Stellar Astrophysics, in greater detail and depth than similar topics in AST 3213. Emphasis on current stellar structure, evolution models and the underlying observational data. Prerequisites: PHY 3124, PHY 3503, PHY 4324, PHY 4222 or equivalent.

**ENU 4101 Introduction to Nuclear Reactors (3).** An elementary course in nuclear fission reactor theory and power plant operation. An overview of the relevant nuclear processes and their application to reactor design. Prerequisites: PHY 3048, 3049.

**PHS 4303 Nuclear Physics (3).** A treatment of the current state of the nuclear theory problem and a discussion of modern experimental methods. Prerequisites: PHY 3123, 3124.

**PHS 5404 Solid State Physics (3).** Crystalline form of solids, lattice dynamics, metals, insulators, semi-conductors, crystalline surfaces, and amorphous materials. Prerequisites: PHY 3124 or CHM 3411.

**PHY 2023 Survey of General Physics (3).** Units, quantities, Newton's laws, work, momentum, fluids, heat, gas laws, waves, charge and current, electric fields, circuits, light, atomic and nuclear physics. Prerequisites: Algebra, trigonometry (high school).

**PHY 3048, PHY 3049 Physics with Calculus (5,5).** Basic physics with calculus sequence. PHY 3048 will cover kinematics, Newton's Laws, conservation laws, gravitation, fluids, sound, and thermodynamics. Prerequisite: MAC 3311. Pre or Co-requisite: MAC 3312. PHY 3049 will cover electricity and magnetism, field theory, geometrical and wave optics.

**PHY 3048L, PHY 3049L General Physics Laboratory I, II (1,1).** Laboratory sections of PHY 3048, 3049, PHY 3053, 3054. Prerequisites or Corequisites: PHY 3048, PHY 3049, PHY 3053, PHY 3054.

**PHY 3053, PHY 3054 Physics without Calculus (4,4).** A general introductory course using a non-calculus approach. PHY 3053 covers kinematics, Newtonian mechanics, properties of fluids, thermodynamics, and wave motion. PHY 3054 covers electricity and magnetism, geometrical and wave optics and the structure of matter. Prerequisites: College algebra, trigonometry, and analytic geometry.

**PHY 3123, PHY 3124 Modern Physics (3,3).** Recent developments in physics are discussed. Subject matter includes: review of classical physics, special relativity, four-vectors, wave-particle duality, the hydrogen atom, many electron atoms, nuclear instrumentation, nuclear structure, nuclear reactions, elementary particles, introduction to quantum mechanics, and solid state physics. Prerequisites: PHY 3048, 3049.

**PHY 3424 Optics (3).** General formulation of geometrical optics including matrix techniques, interference phenomena, and the theory of Fraunhofer and Fresnel diffraction are among the topics covered. Prerequisites: PHY 3048, 3049.

**PHY 3503 Thermodynamics (3).** Fundamental principles of thermodynamics, the first, second, and third laws, free energy, entropy, the chemical potential, phase rule and its applications. Prerequisites: PHY 3048, 3049, CHM 1045, 1046.

**PHY 3772 Electronics (3).** Solid state theory and the theory of circuits, circuit operation and design in lecture and laboratory sessions. Prerequisites: PHY 3048, 3049.

**PHY 3949, PHY 4949 Cooperative Education in Physics (1-3).** One semester of full-time supervised work in an outside laboratory taking part in the University Co-Op Program. Limited to students admitted to the Co-op Program. A written report and supervisor evaluation will be required of each student.

**PHY 4221, PHY 4222 Intermediate Classical Mechanics I & II (3,3).** Laws of motion, statics of particles and rigid

bodies, motion of particles in one, two, and three dimensions, systems of particles, rigid bodies in a plane, central forces. Accelerated reference systems, rigid body in three dimensions, generalized coordinates, Lagrangian and Hamiltonian formulations of mechanics, vibrating systems, and normal coordinates. Prerequisites: MAC 3313, PHY 3048, 3049.

**PHY 4323, PHY 4324 Intermediate Electromagnetism I and II (3,3).** The theory of electromagnetic fields and waves is developed from basic principles. Vector calculus, Coulomb's law, Gauss's Law, electrostatic potential, dielectrics, solutions to Laplace's and Poisson's equations, magnetic induction, vector potential, magnetic materials, Maxwell's equations, and propagation of waves in space and various media are discussed. Prerequisites: MAC 3313, PHY 3048 and 3049.

**PHY 4513 Statistical Thermodynamics (3).** Review of the fundamental laws of thermodynamics applied to simple systems. Elementary kinetic theory of gases applied to diffusion, viscosity, thermal and electrical conductivity. Boltzmann, Fermi-Dirac and Bose-Einstein distribution functions applied in the Boltzmann limit to the calculation of thermodynamic variables. Prerequisites: MAC 3313, PHY 3048, 3049.

**PHY 4604 Quantum Mechanics I (3).** A comprehensive introduction to quantum mechanics. Wave mechanics applied to standard one dimensional problems and the hydrogen atom. Prerequisites: MAP 3302, PHY 3048, PHY 3049.

**PHY 4605 Quantum Mechanics II (3).** General matrix formalism, angular momentum, symmetries, perturbation theory and variational methods, an introduction to relativistic theory and theory of fields. Prerequisite: PHY 4604.

**PHY 4752L Introduction to Scientific Instrumentation (3).** The student learns to set up and operate such standard pieces of laboratory apparatus as bridges, amplifiers, oscilloscopes, frequency counters, flowmeters, and thermocouple circuits utilizing chart recorders. A background in general physics is required.

**PHY 4810L Senior Physics Lab (3).** Advanced laboratory topics are treated. Modern physics laboratory equipment is used and the student is introduced to current laboratory practice. Prerequisites: PHY 3048 and 3049.

**PHY 4905, PHY 4906, PHY 4907 Independent Study (3).** The student works under the supervision of a faculty member on subject matter of mutual interest. Instructor's permission is required.

**PHY 4936, PHY 4937, PHY 4938 Special Topics (VAR).** A study of topics of special physics interest.

**PHZ 4710 Introduction to Biophysics (3).** Physical investigation of biological molecules with special reference to structure and function of protein, biomembranes and visual receptors. Prerequisite: PHY 3124 or CHM 3411.

**PHY 5115 Mathematical Physics I (3).** Methods of solution for problems in mathematical physics: Variational principles, complex variables, partial differential equations, integral equations, and transforms. Prerequisites: MAC 3313, MAP 3302.

**PHY 5116 Mathematical Physics II (3).** Additional solution methods in mathematical physics: Perturbation methods, Laplace's and Poisson's Equations, waves, special functions, vector fields, vector waves. Prerequisite: PHY 5115.

**PHY 5240 Advanced Classical Mechanics (3).** Advanced formulations of the equations of motion and their applications: the central field problem, rigid body dynamics, oscillations and continuous systems. Prerequisite: PHY 4222.

**PHY 5346 Advanced Electromagnetic Theory I (3).** Advanced treatment of classical electromagnetism: Electrostatics, Green's function, Laplace's equation, multipole expansion, magnetostatics, Maxwell's equations, waves. Prerequisite: PHY 4324.

**PHY 5347 Advanced Electromagnetic Theory II (3).** Additional topics in classical electomagnetism: Wave guides, radiating and diffracting systems, Kirchoff's integral for diffraction, covariant formulation of field equations. Prerequisite: PHY 5346.

**PHY 5930 Seminar in Physics (1-3).** A series of specialized lectures/seminars on selected topics in Physics/Astro-Physics. Prerequisites: Permission of Department.

**PHY 5936 Special Topics Research (1-10).** Participation in an original investigation in theoretical or experimental physics/astro-physics under direct faculty supervision. Prerequisite: Permission of instructor.

**PHY 5937, PHY 5938 Seminar in Special Topics (3).** Seminar work under the supervision of a faculty member on subject material of mutual interest.

**PHZ 5130 Theoretical Treatment of Experimental Data (3).** Statistical analysis of physical processes and statistical tests, with particular emphasis on instrumentation-related problems. Mathematical modeling and computer simulation. Prerequisite: Undergraduate statistics course, or equivalent, or permission of instructor.

**PHZ 5234 Atomic and Molecular Collision Phenomena (3).** Investigation of atomic and molecular collision phenomena: Kinetic theory, elastic scattering, inelastic scattering, excitation and ionization, heavy particle collisions. Prerequisites: PHY 4605 and PHY 4222.

**PHZ 5505 Low Energy Plasma Physics (3).** The investigation of the kinetics of rarefied gases and thermal plasmas: Phase space, random currents, orbit theory, plasma sheaths, radiation, the pinch effect. Prerequisites: PHY 3503, PHY 4324, and PHY 4222.

**PHZ 5606 Special Relativity (3).** A detailed study of special relativity: Lorentz transformations, relativistic electrodynamics. Prerequisite: PHY 3124.

## Political Science

**Joel Gottlieb,** *Associate Professor and Chairperson*
**Bruce Detwiler,** *Associate Professor*
**Eduardo Gamarra,** *Assistant Professor*
**Antonio Jorge,** *Professor*
**Dario Moreno,** *Assistant Professor*
**Brian Nelson,** *Associate Professor*
**Nicol Rae,** *Assistant Professor*
**Mark Rosenberg,** *Professor*
**Cheryl Rubenberg,** *Associate Professor*
**Rebecca Salokar,** *Assistant Professor*
**John Stack,** *Professor*
**Judith H. Stiehm,** *Professor and Provost*
**Mary Volcansek,** *Professor*
**Christopher Warren,** *Associate Professor*

### Bachelor of Arts

The major in Political Science provides students the opportunity to acquire a broad education that will equip them to adapt to a wide variety of careers. The program for majors is designed to encourage the analysis of theories, institutions, and processes of political systems in the context provided by the social sciences; to stimulate a grasp of the broad sweep of political science as a discipline; to develop a continuing and responsible interest in political activity and public affairs; to provide the opportunity

to acquire a fundamental understanding of political science as a basis for citizenship, a career in government, or professional study and service; and to stimulate the qualified student's interest in graduate study in political science.

The curriculum is designed to expose students to the various areas of Political Science and to allow for some specialization. Students are encouraged to create a blend of courses that fit their interests. You should work with your faculty advisor in selecting courses. The Department will ensure that sufficient course choices will be available to meet the curriculum requirements over a two-year cycle.

To qualify for admission to the program, FIU undergraduates must have met all the lower division requirements including CLAST, completed 60 semester hours, and must be otherwise acceptable into the program.

If a student has completed a minimum of 24 semester hours of general education credits, it is still possible to be accepted into this program. However, the general education deficiencies need to be completed prior to graduation from the University.

### Curriculum for Political Science Majors

A minimum of 30 credit hours of upper division study (3000 and 4000 level) are required for a major in Political Science. In addition, POS 2042-American Government, or its equivalent, is required but does not count toward the 30 credit minimum. The American Government course at the community college meets this requirement. Students who have not met this requirement should take this course in their first semester at FIU. No specific upper division courses are required. Rather, courses in Political Science must be distributed so that five courses meet the Breadth requirement, three courses meet the Depth requirement, and two remaining courses meet the Political Science Electives requirement. The student must earn a grade of 'C' or better in all Political Science courses credited toward the major. Students choosing to major in Political Science must officially declare their major by completing applicable forms. See the department secretary for assistance.

### Requirements for a Major

#### I. Breadth Requirement

This is designed to acquaint all majors with the five general fields in Political Science. One three-semester hours course must be taken in each of the following fields, for a total of 15 semester hours.

**American Politics (AP)**-This Breadth area can be met **only** by one of the following courses:

| | | |
|---|---|---|
| POS 3153 | Urban Politics | 3 |
| POS 3424 | The Legislative Process | 3 |
| POS 3453 | Political Parties | 3 |
| POS 3413 | The Presidency | 3 |

**Judicial Politics (JP)**-This Breadth area can be met **only** by one of the following courses:

| | | |
|---|---|---|
| POS 3283 | The Judicial Process | 3 |
| POS 3603 | Constitutional Law: Powers | 3 |
| POS 3604 | Constitutional Law: Limits | 3 |

**Comparative Politics (CP)**-This Breadth area can be met **only** by one of the following courses:

| | | |
|---|---|---|
| CPO 3055 | Authoritarian Politics | 3 |
| CPO 3103 | Government and Politics of Western Europe | 3 |
| CPO 3304 | Latin American Politics | 3 |
| CPO 3403 | Government and Politics of the Middle East | 3 |
| CPO 3643 | Government and Politics of the Soviet Union and Eastern Europe | 3 |

**International Politics (IP)**-This Breadth area can be met **only** by one of the following courses:

| | | |
|---|---|---|
| INR 3002 | Dynamics of World Politics | 3 |
| INR 3102 | American Foreign Policy | 3 |

**Political Theory and Methodology (PT)**-This Breadth area can be met **only** by one of the following courses:

| | | |
|---|---|---|
| POT 3013 | Ancient and Medieval Political Theory | 3 |
| POT 3054 | Modern Political Theory I | 3 |
| POT 3055 | Modern Political Theory II | 3 |
| POT 3302 | Political Ideologies | 3 |
| POT 3064 | Contemporary Political Theory | 3 |
| POT 3204 | American Political Thought | 3 |

#### II. Depth Requirement

This is designed for student specialization in one of these areas. Students must take three courses in any one of these areas of concentration.

**1. American/Judicial Politics (AP,JP)**

Courses chosen may be all "AP" or "JP" or a mix of both.

**2. Comparative/International Politics (CP,IP)**

Courses chosen may be all "CP" or "IP" or a mix of both.

**3. Political Theory And Methodology (PT)**

#### III. Political Science Electives Requirement

Any two 3000, 4000, or 5000 level courses in political science.

### Political Science Minor

A Political Science minor consists of any five courses in Political Science with a 'C' or better grade. POS 2042-American Government, or its equivalent is a prerequisite for a minor and does not count towards the five (5) courses. Neither independent study nor internships will count toward the minor. Students should select specific courses in consultation with their major advisor and a Political Science advisor. Students must apply for a minor by completing a Request for Minor Form and have it signed by their Major Advisor and Minor Advisor.

### Pre-Law Students

The Department of Political Science recognizes the interests and needs of the Political Science major who plans to attend law school. The basic skills important to a pre-law student include:

(1) how to think logically,
(2) how to read intelligently, and
(3) how to express oneself clearly

These skills are developed in a number of disciplines. Beyond these basic skills, the department encourages students to acquire a broad background in political science rather than to select only courses which deal with public law. Some pre-law students choose American or Judicial politics as their depth area, but the other two depth areas are equally useful for pre-law students. The department's pre-law Advisors will counsel students on specific pre-law concerns.

In selecting electives, students should remember that the LSAT and law school require the ability to read with comprehension of concepts and logic and to express oneself with clarity and precision. Whether or not a given student will benefit from a particular elective is a question best answered by the student in close consultation with an advisor. Courses in History, Philosophy, Economics, Sociology, Psychology, Math and English will probably all give the student practice in relevant skills. Breadth of preparation is important. Whether a particular course in logic, writing or another area is the best choice, can only be answered on an individual basis.

### Public Affairs Internships

The Department provides opportunities for practical work-study experiences in governmental and nongovernmental agencies. Three categories of internships are available to qualified students:

1) Judicial Internships (Prerequisite: POS 3283-Judicial Process or equivalent)

2) Legislative Internships (Prerequisite: POS 3424-Legislative Process or equivalent)

3) Campaign Internships (In election year).

Standards for enrollment as an intern student include:

a. Enrollment is by permission of instructor only. A student wishing to enroll as a public affairs intern should consult with the appropriate faculty member early in the preceding semester and receive written permission to enroll. Ordinarily, specific courses must be taken prior to, or concurrent with, the internship.

b. A Political Science major may count a maximum of six credit hours in internships toward his/her major.

c. All public affairs internships in political science will be on a "Credit-No Credit" basis. For further information on internships, contact your political science advisor.

### Upper Division Transfer Credit

As a general rule, students will receive transfer credits for junior and senior level courses in political science with a grade of 'C' or higher. These courses may then be applied to the 30 credit hours requirement for majors in political science.

### Major Advising Program

All new majors meet with the Department Chairperson prior to being assigned an advisor. All advisors are members of the political science faculty and meet with students on a regular basis to discuss program design and scheduling matters.

### A Note to North Miami Majors

At this time, to major in Political Science at North Miami, students for all practical purposes must choose American Politics/Judicial Politics as their depth area. Of course, students may choose their depth area in Comparative Politics/International Politics or Political Theory if they are willing to take some courses at University Park. North Miami students are particularly well-advised to plan ahead and discuss their program of studies with a Political Science Advisor.

## Course Descriptions

### Definition of Prefixes

CPO-Comparative Politics; INR-International Relations; POS-Political Science; POT-Political Theory; PUP Public Policy.

**CPO 3001 Introduction to Comparative Politics (3).** Analysis of major theories of comparative politics including development, state building, institutions, patterns of political interaction and comparative elites. Focus on Latin America and the Third World.

**CPO 3055 Authoritarian Politics (CP) (3).** The purpose of this course is to identify the conceptual and empirical characteristics of authoritarian regimes. An ideal typical authoritarian regime will be established, followed by case study analyses of modern authoritarian systems, like those of Brazil, Mexico, and Portugal. The course is designed to analyze the circumstances giving rise to non-totalitarian modern dictatorships, their political dynamics, and their survival capability.

**CPO 3103 Government and Politics of Western Europe (CP) (3).** Studies of political systems of the major European countries on a comparative basis. Attention is focused on such factors as political party systems, the cabinet form of government, and the politics of the Common Market. Considers the implications of the impact of mass society on these nations. Enables the students to better understand the nations which have supplied many of the theoretical foundations of modern politics.

**CPO 3304 Latin American Politics (CP,PT) (3).** This course analyzes the multiple structures, processes, and groups which are relevant to an understanding of Latin American political economy. Of special interest are the political impacts of land and wealth inequality and economic dependency. The dynamics of Latin American politics are considered, with an emphasis on the role of the military and the church. Alternate strategies for modernizing the region are considered.

**CPO 3340 Politics of Mexico (CP) (3).** This course analyzes the structure and process of the Mexican political system from four perspectives: 1) Mexico's revolutionary heritage; 2) its formal governmental structure; 3) formal political relations; and 4) the structure and process of Mexican political economy.

**CPO 3401 The Arab-Israeli Conflict (CP/IP) (3).** This course provides the student with an introduction to the political roots of the Middle East conflict, and examines the dilemmas of finding a solution by focusing on the domestic and international constraints imposed upon the major actors.

**CPO 3403 Politics of the Middle East (CP) (3).** This course will focus on the social, cultural, and political aspects of the Middle East region. Through an understanding and an interweaving of these complex facets, a student should gain a foundation and background for comprehension of the contemporary conflict which pervades this mercurial region.

**CPO 3643 Government and Politics of the Soviet Union and Eastern Europe (CP) (3).** An intensive examination of the political structures and institutions of the Soviet Union and East European Communist states. Particular attention is paid to the historical and cultural underpinnings of the Soviet regime. The role of the Marxist-Leninist ideology in shaping policy processes and content is given careful analysis.

**CPO 4010 Theory in Comparative Politics (CP) (3).** This course introduces students to research strategies, concepts, and theories of comparative politics. There will be a focus on the three predominant types of modern political systems (democracy, authoritarianism, and totalitarianism), followed by an examination of the current theoretical approaches to studying cross-national political behavior.

**CPO 4034 The Politics of Development and Underdevelopment (CP/IP) (3).** This course is an analysis of the causes of development and underdevelopment in Third and Fourth World countries. It includes an analysis of major theoretical approaches to understanding development problems, as well as an analysis of the roles of major national and non-national actors.

**CPO 4053 Political Repression and Human Rights (CP) (3).** Examination of domestic factors resulting in political repression and violations of human rights. American, European, and South American examples will be used.

**CPO 4063 Comparative Socialist Systems (CP) (3).** Differences and similarities among socialist countries are explored and explained. Focus on China, Soviet Union, Yugoslavia, and Cuba. Stress development, ideology, change, structures, the Party, control, and foreign policy.

**CPO 4072 Comparative Electoral Behavior (CP) (3).** Public opinion, voting choice, and electoral patterns from a

comparative and historical perspective. Attention will focus on West Europe and Latin America. Differences from North American trends and patterns will also be detailed.

**CPO 4303 Government and Politics of South America (CP) (3).** A cross-national discussion of the political systems and cultures of the Latin American nations, with special emphasis on the larger countries. Attention is given to the role of the military and to the problem of violence. Designed to give the student an overview of the political life of the nations with whom we share this hemisphere.

**CPO 4323 Government and Politics of the Caribbean (CP) (3).** Studies the political system of the major British, French, Dutch, and Spanish areas in the Caribbean basin. Attention is focused on such factors as political party democracies in a non-industrial setting. The paradoxes between modernity and tradition throughout the developing Caribbean, and the relationship between politics, economics, and culture are discussed. The student is helped to understand the dynamics of change in an important area of the world and to compare those dynamics with change in his own country.

**CPO 4333 Central American Politics (CP) (3).** This course analyzes the historical and contemporary political dynamics of the five countries of Central America. Special attention is given to problems of development and modernization within the context of the region's economic dependence on the United States. Special attention is given to the problem of political restraints on the modernization process and to those regional arrangements which have been created to solve the area's problems. The student will develop a better understanding of a region which has close ties to the United States.

**CPO 4360 Cuban Politics (CP) (3).** Examines the course of twentieth century Cuban politics. The course is subdivided into five parts covering the three periods of relatively stable politics and the two major revolutions.

**CPO 4930 Topics in Comparative Politics (CP) (1-6).** An intensive examination of a topic in comparative politics. Subject matter varies according to the instructor. Topic to be announced in advance.

**CPO 5036 Politics of Development (5).** This course examines divergent explanations for development and underdevelopment. Of central importance are the concepts and theories which emphasize the political dimensions of development, including theory and concept, processes of development, and actors in the development process.

**CPO 5935 Topics in Comparative Politics (1-6).** A rigorous examination of a topic in comparative politics. Subject matter varies according to instructor. Topic will be announced in advance.

**INR 3002 Dynamics of World Politics (IP) (3).** An examination of the political forces which shape the actors, institutions, and processes of world politics. Special attention is given to the role of transnational forces.

**INR 3102 American Foreign Policy (IP, AP) (3).** An examination of the legal, administrative, and political structure by which American foreign policies are formulated and implemented. Includes a discussion of the objectives and consequences of United States foreign policy in selected regional, social-economic, and ideological areas. Enables the student to understand the procedures by which foreign policy is made and implemented in the United States.

**INR 3403 International Law (IP,JP) (3).** The law of nations, including the laws of war. Includes a discussion of the development of legal norms applicable to the international arena, from both Western and non-Western perspectives. Examines the emerging body of transnational law in social, economic, and technological areas of international relations. Enables the student to understand the difficulties involved in maintaining world peace.

**INR 4084 Ethnicity in World Politics (IP) (3).** This course examines the political dimensions of ethnic conflict from a comparative perspective. It evaluates the dynamics of ethnic conflict in Western Europe, Africa, Latin America, and the United States, through a series of case studies.

**INR 4204 Comparative Foreign Policy (CP,IP) (3).** This course is an analysis of the development of the foreign policy-making process in the United States, Britain, France, West Germany, and Italy. Particular attention is directed to the domestic and international factors which affect the making of foreign policy.

**INR 4244 Latin American in World Politics (CP, IP) (3).** This course will be primarily concerned with Latin America's role in the world political system. Of special interest will be the impact of the North-South split on Latin America, and in particular Latin America's relationship to the United States. Key issues of international politics concerning Latin America, including the Panama Canal, will be selected for study.

**INR 4407 Political Foundations of International Law (IP,JP) (3).** An examination of the interaction between politics and international law, with particular emphasis on such interaction during the present century. The role of international institutions in the modifying of existing international law concepts and the developing of such concepts is also examined.

**INR 4501 Multinational Organizations (IP) (3).** The course examines contemporary international politics through an analysis of inter-governmental and non-governmental actors. It emphasizes the prominent role played by increasing levels of transnational relations, interdependence, and global dominance in world politics.

**INR 4702 Politics of World Economy (3).** The politics of world economy with emphasis on the role played by transnational political/economic institutions.

**INR 4931 Topics in International Politics (IP) (VAR).** An intensive examination of selected topics with an international dimension. Subjects will vary, depending upon the desires of both students and faculty. Allows the student to choose topics of particular interest to him or her.

**INR 4932 Topics in the Politics of International Law (IP) (1-6).** An intensive examination of a topic dealing with the politics of international law. Subject matter varies according to instructor. Topic to be announced in advance.

**INR 4933 Topics in International Politics (1-6).** An intensive examination of a topic in international politics. Subject matter varies according to the instructor. Topic to be announced in advance.

**INR 5087 Ethnicity and the Politics of Development (3).** This course examines the conceptual and substantive dimensions of ethnicity in the context of world politics and political development. The course will highlight ethnicity and ethnic groups as critical factors in North-South politics.

**INR 5414 Topics in International Law (3).** An intensive examination of the political dimensions of international law in the context of rapidly changing global political relations.

**INR 5933 Topics in International Politics (1-20).** A rigorous examination in in-

ternational politics. Subject matter varies according to instructor. Topic to be announced.

**POS 2042 American Government (3).** Power distribution and policy-making in U.S. Topics include political change; role of majorities; minorities; media, elections in U.S. politics; national institutions; and Florida state and local government.

**POS 3071 Corporate Power and American Politics (AP) (3).** An examination of the formal and informal linkages between the private and public sectors and the sets of relationships which govern each. Particular attention is devoted to the exploration of the political role of business and the close but uneasy relationship between private enterprise and democracy.

**POS 3153 Urban Politics (AP) (3).** An examination of the processes by which social conflicts in American urban areas are represented and regulated. Emphasis is placed on how urban problems are identified; and the way proposed solutions are formulated, legitimatized, and administered by urban policy-making processes. Includes a discussion of urban political culture. Enables the student to understand major problems confronting communities in urban areas.

**POS 3283 The Judicial Process (JP) (3).** An introduction to the study of public law. Examines the relationship between politics and judicial structure and process. Emphasizes the judicial system as a particular kind of policy-making system, and evaluates its strengths and weaknesses from a policy-making perspective.

**POS 3413 The Presidency (AP) (3).** An examination of the various interpretations of the Presidency. Attention is directed to the role of the President in a technocratic society. Enables the student to understand one of the most visible political institutions.

**POS 3424 The Legislative Process (AP) (3).** Examines the context and process of legislative decision-making, including the impact of elections, groups, bureaucracies, and the norms of legislative behavior. Evaluates legislatures in light of various theories of representation and conflict-management.

**POS 3453 Political Parties (AP) (3).** Studies the internal structure, political functions, and behavior of modern political parties. Attention is given to the relationships between political parties and various economic, ethnic, and regional interest. Enables the student to understand the problems of expressing and structuring political demands to facilitate or obstruct governmental decision-making.

**POS 3603 Constitutional Law: Powers (JP) (3).** An examination of the basic principles of American government, as defined through constitutional law. Focus will be on the nature of the union, federalism, national government powers, separation of powers, state government powers, and powers of the respective branches of government.

**POS 3604 Constitutional Law: Limitations (JP) (3).** An examination of the limitations on government as defined by the Supreme Court through constitutional law. Focus will be on the limitations of government with respect to the rights of the individual, of groups, and of the states. Particular attention will be paid to civil rights, civil liberties, the rights of the accused, political rights, and economic liberties.

**POS 3703 Methods of Political Analysis (PT) (3).** An introduction to the principal concepts and techniques of data collection and organization in political science. Includes practical exercise in data collection and organization. Highly recommended for those planning graduate study.

**POS 3949 Cooperative Education in Political Science (3).** A student majoring in Political Science may spend several semesters fully employed in industry or government in a capacity relating to the major.

**POS 4034 Political Change and the 1960's (3).** A study of the theories of political change in America and their application to the political movements of the 1960's. Emphasis on the civil rights movement, the New Left and the counterculture.

**POS 4122 State Government and Politics (AP) (3).** A study of the political processes, structure, and development of state systems. This course attempts to provide the student with an understanding of the basic structure of state government and political processes.

**POS 4154 Topics in Urban Politics and Policy (AP) (1-6).** An intensive examination of a topic in urban politics and policy. Subject matter varies according to instructor. Topic will be announced in advance.

**POS 4155 Conflict and Change in American Cities (AP) (3).** A study of social conflict in American cities. Emphasis is on how urban problems are identified and proposed solutions are formulated, legitimized and administered by policy-making processes.

**POS 4253 Political Violence and Revolution (CP, PT) (3).** An examination of major historical instances and modern expressions of political violence; discussion of revolution from a comparative perspective. Attention will focus on the social origin and political determinants of such events.

**POS 4463 Interest Group Politics (AP) (3).** An examination of the various types of voluntary associations which seek to influence the political process. Special attention is given to the role of private power in a pluralist system. Enables the student to understand the ambivalent American attitude towards pressure groups and lobbying activities in the legislative and administrative arenas.

**POS 4496 Comparative Judicial Politics (JP,CP) (3).** An examination of the various modes of dispute settlement and rule adjudication cross-culturally. Emphasis is on the similarities and differences of judicial behavior, judicial decision-making, judicial recruitment, and judicial powers in cross-national analysis.

**POS 4605 Gender Justice (AP,JP) (3).** The development of gender law in the U.S. and legal strategies by which courts both initiate and respond to demands for social change. Emphasis on various legal definitions of justice and equality.

**POS 4905 Independent Study (1-6).** Designed for advanced students who wish to pursue specialized topics in political science. Arrangements must be made with instructor during the prior semester.

**POS 4930 Topics in Public Law (JP) (1-6).** An intensive examination of a topic dealing with public law. Subject matter varies according to instructor. Topic will be announced in advance.

**POS 4931 Topics in Politics (AP) (1-6).** An intensive examination of a topic in politics. Subject matter varies according to instructor. Topic will be announced in advance.

**POS 4935 Honors Seminar (1-6).** A rigorous examination of a political topic designed for advanced political science majors. Subject matter varies according to instructor. Topic to be announced in advance.

**POS 4941 Legislative Internship (AP) (VAR).** An opportunity for the student to participate in a selected policy area

within one of the communities of South Florida. The nature of the work to be accomplished in connection with the internship will be worked out between the student and advisor.

**POS 4944 Judicial Internship (JP) (VAR).** An opportunity for the student to participate in a selected policy area within one of the communities of South Florida. The nature of the work to be accomplished in connection with the internship will be worked out between the student and advisor.

**POS 4949 Cooperative Education in Political Science (3).** A student majoring in Political Science may spend one or two semesters fully employed in industry or government in a capacity relating to the major.

**POS 5158 Topics in Politics (VAR).** Subject matter varies according to instructor.

**POS 5638 Topics in Public Law (JP) (1-20).** A rigorous examination of a topic in public law. Subject matter varies according to instructor. Topic will be announced in advance.

**POS 5706 Methodology (3).** This course is an introduction to the principal concepts and techniques of quantitative and non-quantitative methodology in the Social Sciences. It is designed to familiarize the student with the language and format of quantitative and non-quantitative applications in order to permit students to deal effectively with the literature of the their field.

**POS 5909 Independent Study (1-20).** Designed for advanced students who wish to pursue specialized topics in political science. Arrangements must be made with instructor during prior semester.

**POS 5932 Topics in Urban Politics (VAR).** An extensive examination of the processes by which social conflicts in American urban areas are represented and regulated. Emphasis is on the ways in which urban problems are identified and proposed solutions formulated, legitimatized, and administered by urban policy-making processes, includes a discussion of urban political culture. Enables the student to understand the major problems confronting communities in urban areas.

**POT 2002 Introduction to Political Theory (3).** The efforts of six writers-as diverse as Plato and Marx-to address from a political perspective such issues as freedom, justice, the individual and the state, and who should rule, are examined.

**POT 3013 Ancient and Medieval Political Theory (PT) (3).** A study of the major political philosophers of the ancient and medieval periods. Primary emphasis is given to the Greek experience. The nature of political theory as a tradition of discourse is examined.

**POT 3054 Modern Political Theory I (PT) (3).** An analysis of the thought of the great political thinkers since Machiavelli, culminating with the nineteenth century theorists. Basic themes and ideas common to all these political theorists will be discussed in detail. The problem of 'modernity' will receive special attention.

**POT 3055 Modern Political Theory II (PT) (3).** An analysis of the thought of the great political thinkers of the late eighteenth, nineteenth, and early twentieth centuries. Primary emphasis is given to the important nineteenth century theorists such as J. S. Mill, Marx, and de Tocqueville. Their theoretical treatment of such modern political phenomena as the masses, bureaucracy, democracy, liberty, and violence is extensively analyzed.

**POT 3064 Contemporary Political Theory (PT) (3).** An overview of the major conceptual frameworks used by political theorists to describe, explain, and evaluate political behavior and processes. Stress is placed on political theory, not only as a basis for inquiry, but also as a base for political action. This course enables the student to develop analytical abilities with which to interpret the political events of his or her time.

**POT 3204 American Political Thought (PT) (3).** An examination of American political thought from its 17th century origins to the contemporary period. The continuities and discontinuities in the development of American political ideas since colonial times will receive special attention.

**POT 3302 Political Ideologies (PT) (3).** An analysis of modern political ideologies since the French Revolution, including liberalism, conservatism, and socialism. Particular emphasis will be given to Marxism. The contemporary link between ideology and totalitarianism will be examined.

**POT 3621 Theories of Justice (3).** An analysis of major theories of justice from Plato to the present. Emphasis on the implications of theory for U.S. constitutional law, the role of judges, and the nature of the "good" society.

**POT 4930 Topics in Political Theory (PT) (1-6).** An intensive examination of a topic in political theory. Subject matter varies according to instructor. Topic will be announced in advance.

**POT 5934 Topics in Political Theory (AP) (VAR).** An intensive examination of selected topics dealing with political theory. Subjects will vary, depending upon the desires of students and faculty. Allows the student to choose topics of particular interest to him or her.

**PUP 4004 Public Policy: U.S. (AP) (3).** An intensive examination of the theory and practice of formulating, legitimatizing, administering, and evaluating public policy. Includes a discussion of the role of administrators, legislators, courts, interest groups and political parties in their processes. Gives the student an analytical basis for understanding and participating in the making of public policy in a variety of policy areas. Prerequisite: Prior work in American institutions: The Congress, Presidency, or Judicial.

**PUP 4203 Environmental Politics and the Law (AP) (3).** An analysis of how the political and legal systems are responding to the risks of pollution and the adverse impacts of development on human health and survival and on natural resources, wilderness, wetlands, and wildlife.

**PUP 4314 American Ethnic Politics (AP) (3).** This course examines American ethnic politics from conceptual and substantive perspectives. Special attention is devoted to the theoretical dynamics of ethnicity as well as an intensive investigation of Irish, Italian, Jewish, and Black ethnic politics.

**PUP 4323 Women in Politics (AP) (3).** Examines the role of women in the political system as they act within, and are affected by, politics. Special attention to current and enduring political issues which particularly affect women.

**PUP 4931 Topics in Public Policy (1-6).** An examination of a topic in public policy. Subject matter varies according to instructor. Topic to be announced in advance.

**PUP 5934 Topics in Public Policy (1-20).** A rigorous examination of a topic in public policy. Subject matter varies according to instructor. Topic will be announced in advance.

**URP 4149 Planning and Human Ecology (AP) (3).** Environmental planning and design utilizing a human ecology perspective. Examines issues of open space planning, urban design, neighborhood planning, and citizen participation.

# Psychology

**Paul Foos,** *Associate Professor and Chairperson*
**Lorraine Bahrick,** *Associate Professor*
**Milton Blum,** *Professor Emeritus*
**Brian Cutler,** *Associate Professor*
**Marvin Dunn,** *Associate Professor*
**Joan Erber,** *Professor*
**Luis Escovar,** *Associate Professor*
**Gordon Finley,** *Professor*
**Ronald Fisher,** *Professor*
**Arthur Flexser,** *Associate Professor*
**Scott Fraser,** *Associate Professor*
**Jacob Gewirtz,** *Professor*
**Edward Girden,** *Distinguished Professor Emeritus*
**Fernando Gonzalez-Reigosa,** *Associate Professor*
**David Kravitz,** *Assistant Professor*
**William Kurtines,** *Professor*
**Mary Levitt,** *Associate Professor*
**Gary Moran,** *Professor*
**Janat Parker,** *Associate Professor*
**James Rotton,** *Associate Professor*
**Juan Sanchez,** *Assistant Professor*
**Bernard Saper,** *Professor*
**Wendy Silverman,** *Associate Professor*

## Bachelor of Arts

### Lower Division Preparation

### Required Course

Completion of Introductory Psychology with a grade of 'C' or higher. This requirement can be fulfilled by the completion of PSY 2020 at the University, or with a comparable course from another accredited college or university.

To qualify for admission to the program, FIU undergraduates must have met all the lower division requirements including CLAST, completed 60 semester hours, and must be otherwise acceptable into the program.

### Upper Division Program

The Psychology major requires 36 hours of upper division psychology coursework, including STA 3111. All courses must be taken for a letter grade.

The program has the following three major psychology components and a fourth, general, component for graduation:

**I. Specific Required Courses in the Following Sequence:** (12 semester hours)

A. Statistics (offered by the Department of Statistics):

STA 3111 Introduction to Statistics 4

*Note*: COP 2210 is recommended for students planning to enter graduate school.

B: PSY 3213 Research Methods in Psychology *(Prerequisites: STA 3111)* 3

C. Advanced laboratory or field experience *(Prerequisites: STA 3111 and PSY 3213)* 5

*Note*: Because the three courses in this component of the program must be taken in sequence, the first course (STA 3111) should be taken no later than the first semester of the junior year.

**II. Distribution Requirement Courses:** (15 semester hours)

To fulfill this required component, each student must take one course or a laboratory/field experience from each of the five areas (A-E) listed below.

| Lecture Courses | Laboratory/Field Experiences |
|---|---|
| **Area A: Experimental** | |
| EXP 3523 | EXP 4404C |
| EXP 4204 | EXP 4005C |
| EXP 4605 | |
| **Area B: Social** | |
| SOP 3004 | SOP 4215C |
| SOP 4522 | SOP 4714C |
| SOP 4525 | |
| SOP 4842 | |
| **Area C: Applied** | |
| CYP 3003 | CYP 4953 |
| INP 3002 | INP 4055L |
| SOP 4712 | |
| PPE 4604 | |
| **Area D: Personality/Abnormal** | |
| CLP 3003 | PPE 4325C |
| CLP 4144 | |
| EXP 3304 | |
| PPE 3003 | |
| **Area E: Developmental** | |
| DEP 3001 | DEP 4704L |
| DEP 3402 | PSY 4932L |
| DEP 4164 | |
| DEP 4464 | |

**III. Required Psychology Course Electives** (9 semester hours):

Any psychology course taken for a letter grade can be used to fulfill the requirement for electives.

*Note*: In some cases a student may fulfill a distribution area requirement with a laboratory course and may not therefore take a lecture course in that area. In such a case, the student must take four (12 hours) elective courses so that the total number of upper division hours for the psychology major reaches the required number of 35 credit hours.

**IV. Electives to Complete the requirement of 60 credit hours:** (24 semester hours)

A student may, but is not required to, take additional upper division psychology courses beyond the required 36 hours towards the fulfillment of the 60 upper division credit hours needed for graduation. Students may, with the permission of the instructor, take PSY 4900 and PSY 4916, which are given Pass/Fail grades. These courses can therefore not count in the category of Required Psychology Electives, but they can be used as additional credit towards graduation. There is a College requirement that at least nine hours of elective credit (not including STA 3111) must be outside of Psychology.

*Remarks:* (1) The student is strongly urged to contact the Psychology Department for advisement in curriculum planning; (2) Limited funds are available through the Psychology Department to students with demonstrated scholastic ability and financial need; (3) Psychology majors are allowed to transfer a maximum of ten upper division semester credit hours toward the psychology degree.

### Bachelor's Degree with Honors

Application must be made and departmental approval granted, to undertake an independent project which must be approved by and carried out under the supervision of a member of the Department. Upon completion of the study, a satisfactory oral defense of the work must be presented to a Department committee.

*Note:* The Bachelor's degree offered in this program is a liberal arts degree and not a professional degree. While it is possible to concentrate courses in one's area of interest, it is not possible at the present time to obtain a 'professional specialization' at the undergraduate level in psychology.

### Minor in Psychology

A Minor in Psychology requires 15 upper division semester hours of approved psychology credits. Students seeking the minor must meet with a psychology faculty member for advisement and should file with the Psychology Department a written notice of intention to minor in psychology. A grade of 'C' or higher (or 'Pass' if taken under the Pass/Fail option) is required in all courses counted toward the minor.

## Course Descriptions

### Definition of Prefixes

CLP-Clinical Psychology; CYP-Community Psychology; DEP-Developmental Psychology; EAB-Experimental Analysis

of Behavior; EDP-Educational Psychology; EXP-Experimental Psychology; INP-Industrial and Applied Psychology; LIN-Linguistics; PCO-Psychology for Counseling; PPE-Psychology of Personality; PSB-Psychobiology; PSY-Psychology; SOC-Sociology; SOP-Social Psychology; SPA-Speech Pathology and Audiology.

**CLP 3003 Personal Adjustment (3).** Study of personal adjustment in the social and occupational life of the individual. Emphasis on interpersonal aspects of effective behavior.

**CLP 4144 Abnormal Psychology (3).** Various forms of behavior pathology are examined in the light of traditional and current concepts of mental health and illness. Problems of diagnosis and treatment are discussed. The role of social mores is examined.

**CLP 4374 Psychotherapy (3).** Current approaches to the treatment and improvement of psychological disorders are critically surveyed. Emphasis is placed on the examination of the various techniques of psychotherapy and behavior therapy. Broader strategies of prevention and mental health promotion, like consultation, counseling, and programmed agency services, are also studied.

**CLP 5166 Advanced Abnormal Psychology (3).** Advanced study of the causes, psychopathology manifestations, and social and personal consequences of behavior disturbance. Emphasis is placed on the critical examination of current research on the biological, psychological, and social aspects of these disorders. Clinical approaches to diagnosis, course, and prognosis in the contemporary mental health context (including 'practicum' assignments if feasible) are covered.

**CLP 5175 Personality Dynamics (3).** A review of different approaches to the study of personality dynamics and of the related therapeutic modalities. Special consideration is given to psychoanalysis and neo-analytic psychology. Other therapeutic models which influence current psychological thought are also considered. Prerequisites: Successful completion of a course in theories of personality, or equivalent. Permission of instructor.

**CLP 5185 Current Issues in Mental Health (3).** A critical, intensive examination of selected, important issues in mental health. Emphasis is given to the empirical study of contemporary problems related to the making of mental patients; planning, programming, and administering mental health services; political, ethical, and legal constraints on the operation of mental health facilities; interdisciplinary cooperation among helping and human service professionals; and evaluation of preventive care and treatment services. Prerequisite: Abnormal Psychology or permission of the instructor.

**CYP 3003 Introduction to Community Psychology (3).** An introduction to the issues and scope of Community Psychology. Students will be exposed to the development of Community Psychology as a growing discipline. Particular emphasis will be placed on the role of the community psychologist as an agent of social change.

**CYP 4953 Community Psychology Field Experiences I (5).** Students will be organized into task-oriented teams or will work independently in the community, for the purpose of becoming familiar with various community institutions and developing an action plan for assisting institutions in implementing change. Prerequisite: PSY 3213 or STA 3123.

**CYP 5534 Groups as Agents of Change (3).** Theory and practice in utilizing groups as agents of change or development in communities and organizations. Didactic presentation and structured exercises focus on relevant issues. Students design and implement problem-focused interventions, using class as client system.

**CYP 5535 Psychology of Institutional and Social Change (3).** A study of the theoretical basis of and strategies applied to the process of effecting social change in community institutions involved in the delivery of human services.

**CYP 5954 Community Psychology Field Experiences II (5).** Same orientation and description as Field Experience I. Students in this course will be able to pursue their work with community institutions in more depth. Prerequisite: Students enrolled in this course must have completed Community Psychology Field Experiences I.

**DEP 3000 Human Growth and Development: Introductory Developmental Psychology (3).** An introductory study of the development of personality, intelligence, and motivation, from childhood to adulthood. Emphasis is on development of cognitive systems through social learning. The full life span of human growth and development will be considered.

**DEP 3001 Psychology of Infancy and Childhood (3).** An introduction to human development focusing on infancy and childhood. Particular attention will be devoted to intellectual, personality, and social development. Consideration will be given to both theoretical and empirical perspectives.

**DEP 3115 Development in Infancy: The Basis of Human Knowledge (3).** Provides a comprehensive review of current methods, theories, and findings in cognitive and perceptual development in the first year of life. Special emphasis on the bases of knowledge; object and event perception, memory, and imitation. Prerequisites: PSY 2020 and one developmental course, any level recommended.

**DEP 3303 Psychology of Adolescence (3).** An examination of psychological, sociological and biological factors contributing to the changes from childhood to adolescence, and biological factors contributing to the changes from childhood to adolescence, and from adolescence to young adulthood.

**DEP 3402 Psychology of Adulthood (3).** The transition from youth to middle age is studied. Focus is on changing roles in family, work, and societal settings, as these factors influence personality and other aspects of psychological function.

**DEP 4032 Life-Span Cognitive Development (3).** Course covers all facets of cognitive growth, change, and decline from infancy through adulthood, and old age. Prerequisite: Any one of: DEP 3000, DEP 3001, DEP 4164, or DEP 4464.

**DEP 4044 Psychology of Moral Development (3).** A review of psychological theories and research concerning the development of moral attitudes and behavior.

**DEP 4164 Children's Learning (3).** Learning in infancy and childhood, with particular emphasis on simple conditioning, discrimination shifts, mediation, transposition, observational, and concept learning. Prerequisite: Students enrolling in this course should have completed successfully at least one prior course in developmental psychology.

**DEP 4182 Socio-emotional Development (3).** A survey of facts and theories of human social emotional development and social learning in the early years of life. Prerequisite: DEP 3000 or DEP 3001.

**DEP 4213 Childhood Psychopathology (3).** Various forms of abnormal behavior in infancy, childhood, and

adolescence are examined within the context of traditional and contemporary psychological theory. Problems of differential diagnosis and forms of remediation are discussed.

**DEP 4464 Psychology of Aging (3).** An examination of the factors that contribute to the psychological profile characterizing old age. Biological and sociological components are considered, and their impact on perceptual, cognitive, and personality processes is analyzed.

**DEP 4704 Developmental Psychology: Lecture (2)**
**DEP 4704L Developmental Psychology Laboratory (3).** Lecture/Laboratory observation exercises illustrative of the concepts and research techniques used in developmental psychology. Particular emphasis is given to cognitive and social-cognitive development. This course is for seniors who have completed PSY 3213, one developmental psychology course, and STA 3111.

**DEP 5056 Issues in Life-Span Developmental Psychology: Infancy through Old Age (3).** A survey in depth of theories, issues, methods, and data in life-span developmental psychology through the entire age range. Prerequisites: DEP 3001 or DEP 4464, or their equivalents, are recommended.

**DEP 5058 Biological Basis of Behavior Development (3).** Introduction to theory and research underlying behavioral development. Covers such pre-and post-natal determinants as evolution, genetics, neuroendocrines, as well as social development, behavioral ecology, and sociobiology. Prerequisite: Graduate standing or permission of instructor. Corequisite: Proseminar courses.

**DEP 5068 Applied Life Span Developmental Psychology (3).** This course is designed to acquaint the student with various applications in life-span developmental psychology. An overview of general issues and areas of application is offered, and specific applications are considered. Prerequisite: Graduate standing or permission of instructor.

**DEP 5099 Proseminar in Infancy, Childhood, and adolescence (3).** Provides a comprehensive review of issues in perceptual, cognitive, social, emotional, and personality development from infancy through adolescence. Prerequisite: Graduate standing or permission of instructor. Corequisite: Proseminars.

**DEP 5118 Current Issues in Cognitive and Perceptual Development in Infancy (3).** Provides an in-depth analysis of current issues, methods, research and theory of cognitive and perceptual development during the first year of life. Special emphasis on object and event perception, memory, and imitation. Prerequisites: Two courses in developmental psychology - any level recommended.

**DEP 5405 Proseminar in Psychology of Adulthood and Aging (3).** A comprehensive review of topics in adulthood and aging including: biological changes, social processes, work, family, cognition, memory, personality, and psychopathology. Prerequisite: Graduate standing or permission of instructor.

**DEP 5608 Theoretical Perspectives in Developmental Psychology (3).** The focus of this course is on the major paradigms, models, and theories that have been influential in developmental psychology, both historically and contemporaneously. Meta-theoretical issues, paradigmatic influences, and specific theories are considered. Prerequisite: Graduate standing or permission of instructor.

**DEP 5725 Research Seminar in Psychosocial Development (1).** This course is designed to develop research skills and competencies in the area of psychosocial development. The emphasis of the course is on involvement in original research. Prerequisite: Permission of instructor. Corequisite: Senior undergraduate or graduate standing.

**DEP 5796 Methods of Developmental Research (3).** Survey of issues and methods at all stages of life-span developmental research including theory, methods, design, and data reduction. Prerequisite: Graduate standing or permission of instructor. Corequisite: proseminars.

**EAB 4794 Principles and Theories of Behavior Modification (3).** Studies different approaches to the modification of problem behavior, through the application of learning principles and theories.

**EAB 5655 Advanced Methods of Behavior Change (3).** An intensive study of selected methods of modifying human behavior, emphasizing the applications of the principles of respondent and operant conditioning, as well as those derived from modern social learning theories. Practice and role playing opportunities are provided in behavior therapy, relaxation therapy, behavior modification, biofeedback or similar behavioral approaches. Prerequisites: EAB 4794, CLP 4374, CYP 4144; enrollment in an authorized program; equivalent background; or permission of instructor.

**EXP 3304 Motivation and Emotion (3).** Introduces several perspectives from learning theory, perception, and personality theory to explore ways in which people move through their physical and social environment.

**EXP 3523 Memory and Memory Improvement (3).** This introduction to human memory considers the topics from a number of points of view. The following issues are addressed: the nature of memory and its phenomena; the capabilities and limitations of an ordinary and an extraordinary memory; and the skills that can aid an ordinary memory.

**EXP 4005 Advanced Experimental Psychology (2)**
**EXP 4005L Advanced Experimental Psychology Lab (3).** Lecture and laboratory course investigating experimental research in the fundamental processes of human behavior. Includes perceptual, cognitive, and linguistic processes. Prerequisites: PSY 3213 and STA 3111.

**EXP 4204 Sensation and Perception (3).** Basic concepts in sensation and perception are explored, with an emphasis on models of peripheral and central neural processing. Topics such as receptor function, brightness and color vision, movement and object perception, perceptual memory and pattern recognition are considered. Psychophysical techniques, such as subjective magnitude estimation and signal detection theory, are covered.

**EXP 4214C Human Perception: Lecture (2) and Laboratory (3).** Lectures concern the methods researchers use to learn about the phenomena of sensation and perception. Laboratory exercises allow students to apply these methods and to experience the perceptual phenomena under investigation. Prerequisites: PSY 3213 and STA 3111.

**EXP 4404C Human Learning and Remembering: Lecture (2) and Laboratory (3) (5).** Lectures on the research and theoretical contributions to the understanding of human learning and remembering; and laboratory exercises illustrative of the concepts and techniques used in conducting experimental studies of human learning and remembering. Prerequisites: PSY 3213 and STA 3111.

**EXP 4605 Cognitive Processes (3).** Investigation of the mental processing underlying experiences and behavior. Topics include: games, puzzles, and problems; intuitive and creative thought;

conceptualization, reasoning and clinical diagnosis; choices and decisions; conceptions of time and space; and thought in abnormal or altered states of consciousness.

**EXP 4934 Current Experimental Theories (3).** The stress in this course is on current specific theories determining the nature and direction of the research and interest in several important areas, such as psychophysics, learning and remembering, developmental patterns and motivation, personality, etc. Topics to be covered will be announced at the beginning of the academic year. May be taken twice for credit toward the major.

**EXP 5005 Advanced Experimental Psychology Lecture (2)**
**EXP 5005L Advanced Experimental Psychology Lab (3).** Lecture and Laboratory courses investigating experimental research in the fundamental processes of human behavior. Includes preceptual, cognitive, and linguistic processes. Prerequisites: PSY 3213 and STA 3122 or STA 3111.

**EXP 5099 Proseminar In Experimental Psychology (3).** Provides a comprehensive review of current research and theory in areas such as learning, memory, cognition, sensation, and perception. Prerequisite: Graduate standing or permission of instructor.

**EXP 5406 Theories of Learning (3).** The major theoretical systems of learning are covered, with the intent of determining how well each accounts for the phenomena of learning. Emphasis is placed on exploring the controversial issues raised by extant theories, and the experimental resolution of these theoretical controversies. The impact of theory on current thinking about learning is considered.

**EXP 5508 Applied Cognitive Psychology (3).** Covers the basic theories of cognitive psychology perception, attention, memory, learning, knowledge, with emphasis on application to real-world problems. Prerequisite: Graduate Standing.

**INP 3002 Introductory Industrial/Organizational Psychology (3).** Introduction to the study of behavior in the work environment. Illustrative topics included formal and informal organization, work motivation, satisfaction and performance, leadership, job analysis, selection and performance evaluation, training, and development.

**INP 4055 Industrial/Organizational Psychology Lecture (2)**
**INP 4055L Industrial/Organizational Psychology Laboratory (3).** Students gain experience with the use of psychometric instruments in the areas of job analysis, personnel selection, performance appraisal, job satisfaction, criteria analysis, and management training and development. Prerequisites: PSY 3213; STA 3111; and INP 3002 or INP 4203, or Personnel Management.

**INP 4203 Personnel Psychology (3).** Techniques and procedures applicable to the selection, placement, utilization, and evaluation of personnel in organizations are considered. The emphasis will be on empirical procedures, rather than the management function in the personnel area. Topics such as quantitative methods and models for selection, criteria analysis, performance appraisal, management training, and job satisfaction are discussed. Prior course in statistics strongly recommended.

**LIN 4710 Language Acquisition (3).** An examination of the way children acquire language, based on experimental findings from contemporary linguistics, psycholinguistics, and behavioral theory.

**LIN 5701 Psychology of Language (3).** An overview of the psychology of language and the psychological 'reality' of linguistic structure. Behavioristic vs. cognitive views of psycholinguistics are examined. Consideration is given to the biological bases of language and thought, language acquisition, and language pathology.

**PPE 3003 Theories of Personality (3).** An examination of various theories of personality. Consideration is given to traditional and contemporary approaches to personality development.

**PPE 3502 Psychology of Consciousness (3).** Normal and altered states of human consciousness are analyzed from the perceptual and neuro-psychological viewpoint. Broad topic areas include physiologically determined levels of arousal, from deep sleep to intense excitement; selective attention; perceptual plasticity; illusions; sensory deprivation; biofeedback; psychosomatic disease; hypnotism and suggestibility; as well as a critical treatment of the phenomena of parapsychology.

**PPE 3670 Psychology of Myth (3).** Mythology is studied from various psychological viewpoints. The process of Myth. Creation and the role of ritual in psychological enhancement are emphasized. Course focuses on classical mythology.

**PPE 4104 Humanistic Psychology (3).** Studies the methodology, research, and findings of the humanistic orientation in psychology. Topics such as counseling, encounter groups, higher consciousness, biofeedback, intentional communities, education, mysticism, and religion are examined from the humanistic viewpoint. Prerequisite: Prior completion of a course in Theories of Personality is recommended.

**PPE 4325C Differential Psychology: Lecture (2) and Laboratory (3).** Lectures and laboratory field experiences in the principles and methods underlying the administration, construction, and evaluation of psychological tests. Practice in the administration and interpretation of selected psychological tests. Prerequisites: STA 3111 or an equivalent introductory course in statistics, and PSY 3213.

**PPE 4514 Psychology of Dreams and Dreaming (3).** An in-depth examination of the most important psychological theories of dream function and of the use of dreams in different therapeutic approaches. The current research on the physiology and psychology of sleep is also evaluated. Prerequisite: Theories of Personality or its equivalent.

**PPE 4604 Psychological Testing (3).** An introduction to the rationale underlying the use of psychological tests. Topics include basic test terminology, test administration, interpreting standard scores, reliability, validity, tests of intelligence, interest inventories, personality tests, the ethics of testing, and the fairness of tests for different segments of the population.

**PPE 4930 Topics In Personality (VAR).** Special topics will be announced in advance.

**PSB 4003 Introductory Bio-Psychology (3).** A study of the more important psychobiologic correlates of behavior in basic psychological phenomena.

**PSY 2020 Introductory Psychology (3).** Psychological principles underlying the basic processes of sensation, perception, cognition, learning, memory, life-span developmental, social behavior, personality, abnormal behavior, and psychotherapy.

**PSY 3213 Research Methods In Psychology (3).** Basic methods in contemporary psychology. Emphasis on the role of methodology and experimentation in subfields of psychology. Students evaluate different designs and conduct original research projects. Prerequisite: STA 3111.

**PSY 3930 Psychology of Humor (3).** A study of the development of sense of humor in comedians and audiences; its ex-

pression in the production and appreciation of comedy, etc.; its psycho-physiologic-social correlates; its effect in maintaining well-being and preventing illness; and its role in human relations.

**PSY 4693 Overview of Psychology (3).** A consideration of the historical origins and developments of modern psychology as a viable discipline, in light of the major influences upon its growth. Prerequisite: 12 semester hours in upper division psychology courses.

**PSY 4900 Independent Readings in Psychology (VAR).** Limited to qualified students who have permission from a faculty member and who present a plan of study including area and objectives. Students enrolled in this course are expected to have regularly scheduled meetings with their faculty advisor, and to submit a written report of their study.

**PSY 4914 Honors Research Project (VAR).** Limited to qualified seniors seeking honors in psychology. Students must submit a research plan and have a research advisor's approval of the research project prior to enrollment in the course. A written report of the research in the A.P.A. publication style must be submitted for evaluation before credit will be awarded.

**PSY 4916 Independent Research in Psychology (VAR).** Limited to qualified students who have permission from a faculty member and who present a written proposal for research. Students enrolled in this course are expected to have regularly scheduled meetings with their faculty advisor, and to submit a written report of their research.

**PSY 4930 Special Topics in Psychology (VAR).** Special topics will be announced in advance.

**PSY 4931 Senior Seminar in Psychology (1).** An advanced seminar for seniors. Analysis of major contemporary trends in psychological theory and research.

**PSY 4932 Psychology of Human Communication (2).** This course covers psychological theory, research and application in the area of human communication. Prerequisite: STA 3111, PSY 3213.

**PSY 4932L Psychology of Human Communication Lab (3).** Laboratory for PSY 4932.

**PSY 4941 Independent Field Experiences in Psychology (VAR).** Limited to qualified students who have permission from a faculty member and who present a plan of study including area and objectives. Students enrolled in this course are expected to have regularly scheduled meetings with their faculty advisor, and to submit a written report of their experiences.

**PSY 5206 Fundamentals of Design of Experiments (3).** CRD and RCB designs. Latin square designs. Factorial, nested and nested-factorial experiments. Fixed, random and mixed models. Split-plot designs. Covariance analysis. Prerequisites: STA 3122 and 3123, or their equivalents.

**PSY 5246C Multivariate Analysis in Applied Psychological Research (3).** Covers basic techniques of multivariate analysis, emphasizing the rationale and applications to psychological research. Includes multiple regression, Hotellings T#, MANOVA, principle component analysis, and factor analysis. Prerequisite: STA 3123 or equivalent; linear algebra recommended.

**PSY 5908 Directed Individual Study (VAR).** Under the supervision of an instructor in the graduate degree program, the graduate student delves individually into a topic of mutual interest which requires intensive and profound analysis and which is not available in a formal offering. May be repeated once. Prerequisite: Permission of instructor.

**PSY 5917 Psychology Research Proseminar (3).** Specialized research and presentation to faculty members in his or her major research area. Seminar style. This course is intended as a core course for the masters program in psychology. Prerequisite: Full graduate admission.

**PSY 5918 Supervised Research (VAR).** Research apprenticeship under the direction of a research professor or a thesis advisor. Prerequisite: Full graduate admission.

**PSY 5939 Special Topics in Psychology (VAR).** Special topics will be announced in advance.

**SOP 3004 Introductory Social Psychology (3).** Introduction to the study of the relationship of the individual to social systems, including topics such as social behavior, attitude development and change, social conflict, group processes, mass phenomena, and communication.

**SOP 3015 Social and Personality Development (3).** This course provides a survey of social and personality development throughout the life cycle. Emphasis will be placed on the interaction between psychological and environmental variables in life-span development changes.

**SOP 3742 Psychology of Women (3).** An examination of women from various perspectives, such as biological, anthropological, mythological, religious, historical, legal, sociological, and psychoanalytical points of view. Discussions of ways in which these various perspectives influence the psychological development of contemporary women.

**SOP 3772 Psychology of Sexual Behavior (3).** An examination of the nature, development, decline, and disorders of sexual behaviors, primarily from the perspectives of normal adjustment and interpersonal relations. Discussion also addresses love, intimacy, and similar emotionally charged socio-psychological topics. Modern and popular treatment approaches - including the 'new sex therapies' are critically evaluated.

**SOP 3932 Psychology of Drugs and Drug Abuse (3).** This course will cover some basic information about the nature and effects of drugs abused, the social and personal dynamics involved in the phenomena of drug abuse and the various rehabilitation programs currently being employed to combat drug abuse.

**SOP 4050 Social Psychology in Latin America (3).** Upper division seminar on Social Psychology in Latin America. The course will provide the student with the opportunity to survey the literature and research in social psychology from different countries in Latin America and to compare that material with on-going research and literature in the United States. Prerequisites: SOP 3004 and reading knowledge of Spanish.

**SOP 4215C Experimental Social Psychology: Lecture (2) and Laboratory (3)-(5).** The primary purpose of this course is to have students conduct actual social psychological experiments. Lecture material will be secondary to (and in the interest of) allowing students to execute representative experiments in areas such as attitude measurement and change, group structure, and communication, etc. Prerequisites: PSY 3213 and STA 3111.

**SOP 4522 Social Motivation (3).** Focuses upon those sources of human motivation that are a consequence of man's social-interpersonal environment and his striving to obtain valued goals. Topics discussed include test-taking anxiety, alienation and affiliation motivation, internal vs. external orientation, achievement motivation, etc. The measurement of social motives and their

roots and consequences for behavior are discussed.

**SOP 4525 Small Group Behavior (3).** Introduction to the study of the structure and function of groups, emphasizing the behavior of individuals as affected by the group. The course focuses on experimental evidence concerning such topics as social facilitation, group decision making, phases in group development, physical factors in group behavior, etc.; rather than upon student experience in sensitivity or encounter training.

**SOP 4645 Consumer Psychology (3).** This course addresses the psychological components contributing to satisfaction and dissatisfaction in buying and selling transactions. The consequences of such transactions, as they affect the environment in which we live as well as society in general, are examined. The interface between business, labor, government, and the consumer as all four groups are involved in consumer affairs is analyzed objectively.

**SOP 4649 Experimental Consumer Psychology: Lecture (2) and Laboratory (3)-(5).** Using the interactional workshop and objective observational methods, students will be required to conduct original research projects related to solving consumer affairs problems. Laboratory requirements include both on-and off-campus work. The former emphasizes techniques and evaluation. The latter is necessary for the gathering of data. Prerequisites: PSY 3213 and STA 3111.

**SOP 4712 Environmental Psychology (3).** An introduction to the man-environment interaction, including psychological, sociological and physical aspects.

**SOP 4714 Environment and Behavior: Lecture (2) and Laboratory (3)-(5).** Students gain experience with laboratory and field techniques used in the study of the reciprocal relationship between the physical environment and human behavior. Prerequisite: PSY 3213 or permission of instructor.

**SOP 4834 Psychology of Health and Illness (3).** Course provides an overview of the field of behavioral medicine, the interface of psychology with health and health care. Psychological factors in illness, health, and health delivery systems will be covered. Prevention and early intervention will be stressed.

**SOP 4842 Legal Psychology (3).** Particular emphasis will be given to interpersonal courtroom processes. Topics considered include scientific jury selection, proximics, persuasive argumentation, witness demeanor, eyewitness testimony, and similar influences upon juror decision making.

**SOP 5058 Proseminar in Social Psychology (3).** An in-depth examination of the role of social psychology in the social sciences and the major substantive problems as they relate to contemporary societal issues. Minimum prerequisite: An introductory course in social psychology or its equivalent.

**SOP 5316 Theories and Methods of Cross-Cultural Research (3).** An intensive analysis of contemporary theories and methods of cross-cultural research in psychology including topics such as: culture as a research treatment, differential incidence of personality traits, the use of ethnographies, 'etic' vs. 'emic' distinction. Prerequisite: Graduate standing or permission of instructor.

**SOP 5616 Social Psychology of Organizations (3).** The application of concepts and theories from social psychology and sociology to the organizational setting. Emphasis would be on role theory, value formation and the operation of norms, including their development and enforcement. Formal and informal organization structure, power and authority concepts, and leadership theories will be covered. Communication processes and networks and their effects on task accomplishment and satisfaction will be included.

## Religious Studies

**Bruce Hauptli,** *Associate Professor and Chairperson, Department of Philosophy and Religion*

**Bongkil Chung,** *Associate Professor*

**Robert Hann,** *Associate Professor and Coordinator*

**Barbara Hogan,** *Assistant Professor*

**James Huchingson,** *Associate Professor*

**Mary Hynes,** *Assistant Professor*

### Bachelor of Arts in Religious Studies

Religious Studies is a program in the Department of Philosophy and Religion.

#### Lower Division Preparation

To qualify for admission to the program, FIU undergraduates must have met all the lower division requirements including CLAST, completed 60 semester hours, and must be otherwise acceptable into the program. Recommended Courses: Religion, Philosophy, History.

**Upper Division Program:** (60 semester hours)

**Required Areas**

**Religion and Culture:** (3)

| | |
|---|---|
| REL 3100 | Introduction to Religion & Culture |
| | or |
| REL 3170 | Religion and Ethics |

**Religions of the World:** (3)

| | |
|---|---|
| REL 3302 | Studies in World Religions |

**Biblical Studies Area:** (3)

| | |
|---|---|
| REL 3210 | Bible I: The Hebrew Scriptures |
| | or |
| REL 3240 | Bible II: The New Testament |

**Methodology in Religious Studies Area:** (3)

| | |
|---|---|
| REL 4030 | Methods in the Study of Religion |

**A Single Religious Tradition Area: (3)**

| | |
|---|---|
| REL 3564 | Modern Catholicism |
| | or |
| REL 3600 | Judaism |
| | or |
| REL 3530 | Protestantism |
| | or |
| REL 4340 | Survey of Buddhism |

**Contemporary Religious Thought Area:** (3)

| | |
|---|---|
| PHI 3700 | Philosophy of Religion |
| | or |
| REL 4420 | Contemporary Religious Thought |
| | or |
| REL 4425 | Contemporary Issues in Christian Theology |

| | |
|---|---|
| **Other Religious Studies Courses** | 15 |
| **General Electives *** | 27 |

*The College of Arts and Sciences requires for the bachelor's degree that a student take at least 9 hours outside the major discipline, of which 6 hours must be taken outside the major department.

*Remarks:* A complete description of the Religious Studies Program is contained in a brochure available at the Department of Philosophy and Religion. Students should refer to the brochure for specific requirements of the major program. Students select their required courses in religious studies with the approval of a faculty member of the Department.

Students are also encouraged to consider a dual major i.e., simultaneously to meet the requirements of two academic majors.

The Department serves the community and professional groups by offering courses off campus. For further information concerning these courses consult the department.

## Minor in Religious Studies

A student majoring in another academic discipline can earn an academic minor in religious studies by taking at least four REL courses (12 semester hours). Students are normally expected to take REL 3302 as one of these courses.

## Course Descriptions

### Definition of Prefixes

GRE-Ancient Greek; REL-Religion; PHI-Philosophy.

**GRE 3050 Introduction to Ancient Greek (5).** This course introduces the Greek language of Plato, the New Testament, and other works of the ancient period. Its goal is to enhance the understanding of translated texts and to prepare for more advanced study of Greek. A portion of the Gospel of John will be studied in class.

**PHI 3700 Philosophy of Religion (3).** This course investigates whether or not religious beliefs can be rationally justified. Such topics as the nature of God, the problem of evil, religious experience, and the relationship of faith to reason will be explored.

**PHI 3762 Eastern Philosophical and Religious Thought (3).** This introductory course examines the development of philosophical and religious thought in the East from ancient to modern times. Hinduism, Buddhism, Confucianism, Taoism, and other major viewpoints will be considered, in themselves and in comparison with Western forms of thought.

**PHH 3840 Indian Philosophy (3).** Metaphysical, epistemological and ethical theories within such major Indian philosophical systems as philosophical Buddhism, Jainism, Samkhya dualism, and Vedanta transcendentalism are examined.

**PHP 3840 Chinese and Japanese Philosophy (3).** Metaphysical and ethical theories of the three main philosophical systems of China, namely, Classical and neo-Confucianism, Taoism, and Chinese Buddhism are examined. For Japanese philosophy, Shintoism is included.

**REL 2011 Religion: Analysis and Interpretation (3)** Introduces methods of critical reflection on religion and some of their applications to fundamental topics such as knowledge, value, the sacred, the individual and human society.

**REL 2300 Religions of the World (3).** Introduction to the major faiths of mankind. Included in the discussion will be Hinduism, Buddhism, Taoism, Judaism, and Christianity. This course will involve a comparison of common elements in these major religions while respecting their distinctive features.

**REL 2936 Special Topics (3).** In-depth study of topics of special interest in religion.

**REL 3003 The Scope and Forms of Religion (3).** An introduction to the many varieties of religious conduct, belief, and practice. Includes a survey of the major world religions, and discussions of the forms of religious experience and contemporary issues.

**REL 3100 Introduction to Religion and Culture (3).** This course explores both the ways religion uses culture to express its basic concerns and the ways that culture and lifestyle reflect religious perspectives. Attention will be given to traditional and popular expressions of American culture.

**REL 3111 Religion in Film (3).** Students examine religious themes, images, symbols and characters in various feature and short films, a specific method of critical analysis, and the religious and societal effects of contemporary films.

**REL 3120 Religion in America (3).** Thematic and historical survey of religious groups in the USA. Traces history of major religious groups, including Native American and new religions, and examines nature and role of religion in the USA.

**REL 3131 American Sects and Cults (3).** Examines several recent religious movements in American life, such as the Unification Church, the International Society for Krishna Consciousness, UFO cults, and others.

**REL 3145 Women and Religion (3).** Explores major themes in studies of women and religion, such as feminist critiques of traditional religions and connections of gender issues with fundamental religious and ethical issues.

**REL 3160 Science and Religion (3).** The methods, assumptions, goals of religion will be compared with those of the natural and human sciences. Specific issues, such as evolution, sociobiology, and the new astronomy will be considered to illustrate similarities and differences between the two approaches.

**REL 3170 Religion and Ethics (3).** This course will examine the nature of ethics in its relationship to faith orientation. After considering the various religious foundations of ethics in the thought of influential thinkers, attention will be given to the application of these perspectives to pressing ethical problems in contemporary society.

**REL 3210 Bible I: The Hebrew Scriptures (3).** This course introduces the literature and thought of the Old Testament, especially as these were shaped in interaction with political, social, and historical currents of the times.

**REL 3240 Bible II: New Testament (3).** This course introduces the thought and literature of the New Testament in its contemporary setting. Attention is given to Jesus and Paul and to later developments in first-century Christianity.

**REL 3270 Biblical Theology (3).** Explores the ideas of God, man, redemption, ethics, and the after-life, tracing each through its development from earliest Hebrew thought to the rise of post-biblical Judaism and Christianity.

**REL 3302 Studies in World Religions (3).** Examines the origins, teachings, and practices of selected world religions. The specific religions selected for examination may vary from semester to semester.

**REL 3303 Religions of Classical Mythology (3).** Examines the beliefs and practices of ancient Egyptian, Semitic, Greek, and Germanic religions, their influences on later civilization and religious thought, and the possible continuing insights offered by each.

**REL 3393 Religious and Magical Rituals (3).** Comparative study of the manipulation of supernatural power through ritual in Eastern, Western, and Primitive traditions. Interdisciplinary theories of ritual considered.

**REL 3492 Man and Nature (3).** This course will explore resources from philosophy and religion that could contribute to a solution of the current environmental crisis. Ethical issues of the environment will especially be examined in the light of these resources.

**REL 3505 Introduction to Christianity (3).** Introduces the basic beliefs and practices of Christianity in their historical and modern forms, including both common and distinctive elements of Catholicism, Protestantism, and Eastern Orthodoxy.

**REL 3510 Early Christianity (3).** This course will survey the First development of Christian thought and practice from its beginnings as a primitive church to its establishment as a major faith in the Middle Ages. It will then consider the relevance of this early experience for modern movements of this faith.

**REL 3520 Medieval Christianity (3).** Surveys Christianity during the middle ages, including its development, medieval theology and religious practices, and its on-going influence in Christianity.

**REL 3530 Protestantism (3).** Surveys Protestantism from the Reformation to the present, including the formation of Protestant theology, the relationship of Protestantism to culture and contemporary developments.

**REL 3532 Reformation (3).** The lives and thoughts of the leaders of the Protestant Reformation will be the focus of this course. Significant attention will be given to the personal experiences and theological perspectives which directed the actions of such persons as Luther, Calvin, and Zwingli, as well as the movements they founded.

**REL 3564 Modern Catholicism (3).** Surveys Catholicism from the Vatican Council to the present, including developments in liturgy, theology, and the relationship of the Church to the world.

**REL 3600 Judaism (3).** This course is an introduction to this major world religion. Following a survey of the history of Judaism, major themes in Jewish religious thought will be highlighted, especially as they relate to modern movements of this faith.

**REL 4030 Methods in the Study of Religion (3).** This course examines a number of the most important methods used in the academic study of religion, together with representative examples of the use of these methods. Prerequisite: Bachelor's degree in Religious Studies or permission of instructor.

**REL 4156 Personal Religion (3).** Reviews religious lives of men and women, famous and ordinary, from mystics to the irreligious. Theories introduced to elucidate variety and dynamics of religion at the personal level.

**REL 4173 Technology and Human Values (3).** This course will explore the sources and impact of modern technology from philosophical and religious perspectives. Topics to be discussed include the effects of technology upon the understanding of human nature, and the relationship among technology, the natural environment, and hopes for a livable human future.

**REL 4205 Current Methods in Biblical Studies (3).** This course introduces the Bible and the methods and tools of biblical study, including translations, word studies, historical studies, and the use of appropriate secondary resources. Prerequisite: REL 3210, REL 3240 or permission of instructor.

**REL 4224 The Prophets and Israel (3).** Examines the setting of the prophets in the history of Israel, their contributions to biblical religion, and their use in later religious and renewal movements.

**REL 4251 Jesus and Paul (3).** Examines the historical settings, teachings, significance, and later interpretations of Christianity's founder and its foremost interpreter.

**REL 4340 Survey of Buddhism (3).** The course will explore the central themes of the main schools of Buddhism developed in India, China, Japan, and Korea. The themes will be examined from religious, moral, and philosophical points of view.

**REL 4345 Zen Buddhism (3).** This course explores Zen (ch'an) Buddhism in its historical, theoretical, and practical dimensions with a specific aim of examining the theme that the Buddha mind can be actualized by awakening to one's own Buddha-nature.

**REL 4420 Contemporary Religious Thought (3).** A survey of major figures in contemporary theology for the purpose of understanding their thought and its application to current issues in religion and society.

**REL 4425 Contemporary Issues in Christian Theology (3).** Examines contemporary efforts to reflect on traditional topics in Christian theology, such as God and human nature, and explores the role of theology in addressing selected social and cultural issues.

**REL 4441 Religion and the Contemporary World (3).** An examination of reflection by religious thinkers and others who employ religious perspectives, concerning select conceptual issues of critical importance in the contemporary world.

**REL 4481 Contemporary Latin American Religious Thought (3).** The major trends of religious thought in Latin America and their impact on the society of the area will be investigated. Special reference will be made to Post-Vatican II theology and to very recent theologies of liberation.

**REL 4910 Independent Research (1-6).** Topics will be selected to meet the academic needs of the individual student. Prerequisite: Permission of instructor.

**REL 4931 Religious Studies Seminar (3).** This seminar is designed for majors and other qualified students approved by the Department. The specific topic will be selected and announced in advance. The number of participants will be limited.

**REL 4936 Special Topics (3).** In-depth study of topics of special interest in religion.

**REL 5911 Independent Research (1-5).** Topics are selected to meet the academic needs of the individual student. Prerequisite: Permission of instructor.

**REL 5937 Special Topics (3).** Topics will be selected to meet the academic needs of groups of students.

## Sociology/Anthropology

**Lisandro Perez,** *Associate Professor and Chairperson*
**Jerry Brown,** *Associate Professor*
**Janet Chernela,** *Associate Professor*
**Stephen Fjellman,** *Professor*
**Chris Girard,** *Assistant Professor*
**Hugh Gladwin,** *Associate Professor*
**Guillermo Grenier,** *Associate Professor*
**James Ito-Adler,** *Assistant Professor*
**Antonio Jorge,** *Professor*
**A. Douglas Kincaid,** *Assistant Professor*
**Barry Levine,** *Professor*
**Kathleen Logan,** *Associate Professor*
**Shearon Lowery,** *Associate Professor*
**Anthony P. Maingot,** *Professor*
**James Mau,** *Professor and Acting Provost*
**Betty Morrow,** *Associate Professor*
**William Osborne,** *Associate Professor*
**Patricia Pessar,** *Associate Professor*
**Alejandro Portes,** *Patricia and Phillip Frost Endowed Professor*
**Alex Stepick,** *Associate Professor*
**William T. Vickers,** *Professor*
**Lois West,** *Assistant Professor*

## Bachelor of Arts in Sociology/Anthropology

### Lower Division Preparation

To be admitted to the upper division, students must meet the University's and College's admission requirements. Coursework in pre-Arts and Sciences, or pre-Anthropology or Sociology is recommended. Students without an AA degree must have the background to handle advanced academic work.

To qualify for admission to the program, FIU undergraduates must have met all the lower division requirements including CLAST, completed 60 semester hours, and must be otherwise acceptable into the program.

**Required Courses**

Introduction to Cultural Anthropology, or Introduction to Physical Anthropology, or Introduction to Sociology. If the student does not have one of these courses, it will be required as part of the upper division program.

**Recommended Courses**

Other anthropology courses; ecology, economics, geography, history, political science, psychology; arts, biology, English, foreign languages, mathematics, philosophy.

**Upper Division Program** (60 semester hours)

**Required Courses:** (27 semester hours)

**Core Courses**

| | | |
|---|---|---|
| ANT 3086 | Anthropological Theories | 3 |
| SYA 3300 | Research Methods | 3 |
| SYA 4010 | Sociological Theories | 3 |
| SSI 3303 | Ethical Issues in Social Science Research | 3 |

**Area Courses:** Either Anthropology or Sociology 15

**Electives:** with the approval of the faculty advisor 33

A grade of 'C' or higher is required for all courses that make up the major (12 semester hours of core courses and 15 semester hours of area courses in Sociology and Anthropology).

## Minor in Sociology/ Anthropology

**Prescribed Courses:**

Fifteen credits in the Department of Sociology/Anthropology including two courses from the following:

| | | |
|---|---|---|
| ANT 3086 | Anthropological Theories | 3 |
| SYA 4010 | Sociological Theories | 3 |
| SYA 3300 | Research Methods | 3 |
| SSI 3303 | Ethical Issues in Social Science Research | 3 |

## Course Descriptions

**Definition of Prefixes**

ANT-Anthropology; DHE-Demography & Human Ecology; HUS-Human Services; LIN-Linguistics; MAF-Marriage & Family; SYA-Sociological Analysis; SYD-Sociology of Demography and Area Studies; SYG-Sociology, General; SYO-Social Organization; SYP-Social Processes.

**ANT 2000 Introduction to Anthropology (3).** This course surveys the four subfields of anthropology, including physical anthropology and human evolution, archaeology, cultural anthropology and linguistics, and introduces basic anthropological theories and concepts.

**ANT 3086 Anthropological Theories (3).** This course examines the process of theory building and explanation in the social sciences, and outlines the historical and philosophical foundations of anthropological thought. Theorists and schools of thought reviewed include Darwin and evolution; Boas and historical particularism; Freud and culture and personality; and Malinowski and functionalism.

**ANT 3100 Introduction to Archaeology (3).** The history of archaeology is traced from its origins to its emergence as a scientific discipline within anthropology. Students are familiarized with the concepts and methods of modern archaeology, and with the scientific goals of archaeological research.

**ANT 3144 Prehistory of the Americas (3).** Early man in the Americas is examined through archaeological records.

**ANT 3241 Myth, Ritual, and Mysticism (3).** A survey of anthropological approaches to the study of myth, ritual, and mysticism, as religious and symbolic systems. The social and psychological functions of myth and ritual in primitive and complex societies will be compared.

**ANT 3251 Peasant Society (3).** Comparative study of peasant societies with emphasis on the concepts of folk community, traditional culture, and modernization. Data on peasantry in Latin America and other culture areas will be reviewed.

**ANT 3302 Male and Female: Sex Roles and Sexuality (3).** Cross-cultural ethnographic data will be utilized to examine the enculturation of sex roles, attitudes and behavior; cultural definitions of maleness and femaleness; and varieties of human sexual awareness and response.

**ANT 3304 Voices of Third World Women (3).** Deals with the literature in the social sciences and humanities written by women of the Third World or others who have recorded their testimony.

**ANT 3409 Anthropology of Contemporary Society (3).** The application of classical anthropological methods and concepts to the analysis of contemporary American culture. Investigation of a unique cultural scene will involve the student in field work and the preparation of an ethnographic report.

**ANT 3403 Cultural Ecology (3).** Systems of interaction between man and his environment; the role of social, cultural, and psychological factors in the maintenance and disruption of ecosystems; interrelations of technological and environmental changes.

**ANT 3422 Kinship and Social Organization (3).** Topics will include comparative study of systems of kinship, social organization and politics in preliterate societies. Age and sex differences, division of labor, class, caste, slavery, and serfdom also will be explored.

**ANT 3442 Urban Anthropology (3).** Anthropological study of urbanization and urban life styles, with particular emphasis on rural-urban migration and its impact on kinship groups, voluntary associations, and cultural values.

**ANT 3462 Medical Anthropology (3).** A survey of basic concepts; examination of preliterate and non-western conceptions of physical and mental health and illness; emphasis on cultural systems approach to the study of illness and health care. Background in biology, medicine, or nursing helpful. Prerequisite: Permission of instructor.

**ANT 3476 Movements of Rebellion and Revitalization (3).** Cross-cultural study of revolutionary, messianistic, and revitalization movements in tribal and peasant societies. Case materials include Negro-slave revolts, cargo cults, and peasant wars of the twentieth century (Mexico, China, Vietnam).

**ANT 3500 Introduction to Physical Anthropology (3).** A study of the biological history of man as interpreted through the theory of evolution, anatomy and the fossil record, contemporary population genetics, and the concept of race.

**ANT 3642 Language and Culture (3).** An examination of the relationship between language and culture, the implications of language for our perceptions of reality, and the socio-cultural implications of language differences for intere-

thnic relations and international understanding.

**ANT 4211-4360-4361-4328 Area Studies (3).** Ethnological survey of selected indigenous cultures. Areas to be studied include: (1) North America; (2) Africa; (3) Asia or Southeastern Asia; (4) China. Topics will be announced and will vary depending on current staff.

**ANT 4224 Tribal Art and Aesthetics (3).** This course deals with the social and cultural context and junctions of art in preliterate societies as in sub-Saharan Africa, New Guinea, and North America. Topics include wood carving, bronze casting, singing, dancing, drumming, masquerading, theatrical performance, and all forms of oral literature.

**ANT 4273 Law and Culture (3).** A cross-cultural examination of the practical and theoretical relationships between the legal system and other aspects of culture and society.

**ANT 4305 Explorations In Visual Anthropology (3).** An examination of the use of film in anthropology, both as a method of ethnographic documentation and as a research technique for analyzing non-verbal modes of communication. Documentary films and cross-cultural data on paralanguage, kinesics, proxemics, and choreometrics will be reviewed and discussed.

**ANT 4306 The Third World (3).** An interdisciplinary, cross-cultural survey of the factors contributing to the emergence of the Third World. Significant political, economic, pan-national and pan-ethnic coalitions are analyzed.

**ANT 4312 American Indian Ethnology (3).** An examination of the socio-cultural patterns of selected American Indian groups as they existed in the indigenous state, prior to European contact.

**ANT 4324 Mexico (3).** An interdisciplinary examination of the major social, cultural, economic, and political factors contributing to the transformation from the Aztec empire to colonial society to modern Mexico.

**ANT 4328 Maya Civilization (3).** A survey of the culture and intellectual achievements of the ancient Maya civilization of Mesoamerica. Course includes: history and social-political structure, archaeology, agriculture and city planning, mathematics, hieroglyphics, astronomy, and calendars.

**ANT 4332 Latin America (3).** Native cultures of Mexico, Central and South America; the lowland hunters and gatherers, and the pre-Columbian Inca and Aztec Empires; the impact of the Spanish conquest.

**ANT 4334 Contemporary Latin American Women (3).** The lives of 20th century Latin American women and gender analysis along class and ethnic dimensions. Discussion of religion, family, gender roles, machismo, and women's roles in sociopolitical change.

**ANT 4335 Inca Civilization (3).** A survey of Andean culture history with emphasis on Inca and pre-Inca civilizations. Includes discussion of peopling of South America, habitats, and the transition from foraging to village settlements, and the rise of indigenous empires.

**ANT 4340 Cultures of the Caribbean (3).** An ethnological survey of native cultures and of the processes of culture contact and conflict in the Caribbean and Circum-Caribbean region.

**ANT 4343 Cuban Culture and the Revolution (3).** Cultural history of Indian, African, and Spanish populations; the Revolution and traditional Cuban society; the problems and prospects of the Cuban community in the United States.

**ANT 4352 African Peoples and Cultures (3).** This course includes a survey of the cultures and civilizations of sub-Saharan Africa. It includes discussions of history, geography, sociopolitical structures, religion, art, music, and oral literature.

**ANT 4406 Anthropology of War and Violence (3).** The purpose of this course is to introduce the scientific study of human aggression and warfare from an evolutionary and cross-cultural perspective in order to gain a better understanding of the causes and consequences of such behavior, and to evaluate proposed options for the control of warfare.

**ANT 4433 Psychological Anthropology (3).** Cross-cultural studies in cognition, possession states, myth making and world view are examined. The interface of anthropology, psychology and psychiatry is reviewed.

**ANT 4451 Racial and Cultural Minorities (3).** The study of selected ethnic and cultural groups, with particular emphasis on patterns of inter-ethnic and intercultural relationships. Minority groups studied may include Afro-Americans, American Indians, Chicanos, Cubans, women, senior citizens or prisoners.

**ANT 4461 Hallucinogens and Culture (3).** Cross-cultural examination of the political, religious, and socio-cultural factors related to altered states of consciousness, including dreams and images. Applications to contemporary psychology are explored.

**ANT 4552 Primate Behavior and Ecology (3).** This course covers the evolution of primates, and primate ecology, social organization, and intelligence. The course will provide students with opportunities to observe and study living primates.

**ANT 4723 Education and Socialization (3).** A cross-cultural examination of educational and socialization processes, their functions in the larger society, and the value systems they transmit.

**ANT 4907 Directed Individual Study (VAR).** Supervised readings and/or field research and training. Prerequisite: Permission of instructor.

**ANT 4908 Directed Field Research (VAR).** Permission of instructor required.

**ANT 4930 Topics In Anthropology (3).** Special courses dealing with advanced topics in the major anthropological subdisciplines: (1) social and cultural anthropology, (2) applied anthropology, (3) physical anthropology, (4) linguistics, and (5) archaeology. Instruction by staff or visiting specialists. Topics to be announced. Instructor's permission required. May be repeated.

**ANT 5316 American Culture and Society (3).** Anthropological analysis of the cultures and subcultures of the United States, focusing on the social, ethnic, and regional organizations and their corresponding value and symbolic systems. Prerequisite: Graduate standing or permission of instructor.

**ANT 5496 Social Research and Analysis (3).** A graduate overview of the scientific methods used in intercultural studies. Includes the philosophical basis of science, research design, and hypothesis testing using both secondary and original data. Students will conduct a research project in this course. Prerequisite: Graduate status or permission of the instructor.

**ANT 5548 Ecological Anthropology (3).** Theories of human adaptation, including environmental determinism, possibilism, cultural ecology, materialism, and evolutionary ecology. Credit for both ANT 3403 and ANT 5548 will not be granted. Prerequisite: Graduate standing or permission of instructor.

**ANT 5908 Directed Individual Study (VAR).** Supervised readings and/or field research and training. Prerequisite: Permission of instructor.

**ANT 5915 Directed Field Research (VAR).** Permission of instructor required.

**SSI 3303 Ethical Issues in Social Science Research (3).** An introduction to the problems of possibilities of ethical premises in the perspectives and work of social scientists. Examination of historical interrelationships between moral philosophies and developing scientific methodologies. Analyses of contemporary social ethicists' attempts to assume moral postures while examining social relations. Case studies involving issues such as nation building in areas of accelerated change including Africa and Asia.

**SYA 3300 Research Methods (3).** An introduction to the scientific methods and its application to anthropological and sociological research. Topics include: formulation of research problems; research design; field methods and collection of data; hypothesis testing and interpretation of results.

**SYA 3949 Cooperative Education in Social Sciences (3).** A student majoring in one of the Social Sciences (Economics, International Relations, Political Sciences, Sociology, or Psychology) may spend one or two semesters fully employed in industry or government in a capacity relating to the major. Prerequisite: Permission of Cooperative Education Program and major department.

**SYA 4010 Sociological Theories (3).** Examines the emergence of sociology as the study of social relations. Compares and contrasts the work of selected theorists, with respect to their methodologies, treatment of the emergence and consequences of modern society, political sociology, conception of social class, and analysis of the role of religion in society. The student is expected to gain in-depth knowledge of opposing theories, as well as an appreciation of the contingent nature of sociological theories.

**SYA 4011 Advanced Social Theory (3).** An analysis of various classical and current sociological theories, with particular attention paid to their conceptions of man in society and the wider implications such conceptions have. The theories of Durkheim, Parsons, Weber, Goffman, Bendix, and Dahrendorf are examined.

**SYA 4124 Social Theory and Third World Innovations (3).** An examination of the contributions to social theory by intellectuals of the Third World. Particular attention is paid to theory derived from classical Marxism.

**SYA 4170 Comparative Sociology (3).** A cross-cultural and cross-national survey of sociological studies, with particular emphasis on theoretical and methodological issues. Examples will be drawn from studies on culture patterns, social structures, sexual mores, power relationships and the ethical implications of cross-national research.

**SYA 4330 Basic Research Design (3).** Advanced course in social research, providing research practicum for studying patterns of human behavior; analyzing findings of studies, methodical and analytical procedures; reporting and explaining these results; and applying these inferences to concrete situations. Also acquaints the student with the use of computers in research in the behavioral sciences.

**SYA 4354 Historical Sociology (3).** The authenticity and meaning of historical data for sociological research. Systematic theories in history are analyzed for their utility in sociology. Particular emphasis on the sociological uses of the comparative method in history.

**SYA 4621 Sociology of the 20th Century (3).** An examination of the sociological implications evident in the events of our modern world. Heavy reliance is placed on intellectual materials other than social science, especially literature.

**SYA 4905 Directed Individual Study (VAR).** Supervised readings and/or field research and training. Prerequisite: Permission of instructor.

**SYA 4941 Directed Field Research (VAR).** Permission of instructor required.

**SYA 4949 Cooperative Education in Social Sciences (3).** A student majoring in one of the Social Sciences (Economics, International Relations, Political Science, Sociology, or Psychology) may spend one or two semesters fully employed in industry or government in a capacity relating to the major. Prerequisites: Permission of Cooperative Education Program and major department.

**SYA 5135 Sociology of Knowledge (3).** The study of the theoretical basis of knowledge and the inter-relatedness of knowledge and social factors, particularly as knowledge relates to institutional forms of behavior.

**SYA 5909 Directed Individual Study (VAR).** Supervised readings and/or field research and training. Prerequisite: Permission of instructor.

**SYA 5941 Directed Field Research (VAR).** Permission of instructor required.

**SYD 3600 The Community (3).** The social group known as the community is identified and analyzed for its distinctive qualities. By distinguishing it from other social groups, its dominating force on the behavior of its members is isolated. Attention is given to the interaction of individuals and groups as they exist within the community.

**SYD 4410 Urban Sociology (3).** Study of the urban community, with particular attention to the problems associated with urban life. The development of urban societies is reviewed historically, and factors associated with this development are identified.

**SYD 4601 Community Organization (3).** An intensive study of how communities are organized, with special emphasis on the interactive processes of the varied components of a community. Special study, permitting students to concentrate on interest areas, is required.

**SYD 4610 Area Studies: Social Structures and Problems (3).** Special courses on the social structures and related problems of specific geographical and cultural areas. To be offered at various times.

**SYD 4630 Latin American and Caribbean Social Structures (3).** Exploration of the types of social structures, statuses, and roles, and the resulting distributions of power and authority in the hemisphere.

**SYD 4700 Minorities/Race and Ethnic Relations (3).** The study of social groups identified by racial or ethnic characteristics. Particular emphasis is given to the role of minorities in society, and the interactive process resulting from their contact with the majority. Social behaviors of minorities are reviewed and related to institutional structures and their accepted norms.

**SYD 4704 Seminar in Ethnicity (3).** An upper-level seminar, stressing a comparative sociological approach to the study of two or more racial-ethnic groups. Emphasis on the interrelations of ethnic communities within the same society and the socio-political effects of these interrelations. Prerequisite: SYD 4700 or permission of Department.

**SYD 4810 Sociology of Gender (3).** An examination of women's and men's roles, statuses, and life opportunities in society. Consideration of current theories of gender inequality.

**SYD 5045 Demographic Analysis (3).** The study of the processes that determine the size and composition of hu-

man populations. Emphasis on demographic transition theory and the antecedents and consequences of differential growth rates throughout the world.

**SYG 2000 Introduction to Sociology (3).** This course introduces the sociological perspective and method, and the basic areas of sociological interest such as socialization, sex roles, social groups, race and ethnic relations, deviance and social control, social stratification, and urban life.

**SYG 3002 The Basic Ideas of Sociology (5).** The course introduces the student to the ideas of community, authority, status, alienation, and the sacred, as used in sociological literature.

**SYG 3010 Social Problems (3).** An introduction to the concept of a social problem and the approaches used to understand more fully the total dimensions of some specific problems. Special emphasis is given to clarifying one's understanding of the underlying nature of selected social problems, an analysis of those aspects amenable to remedy, and an inventory of the knowledge and skills available.

**SYG 3320 Social Deviancy (Deviant Behavior) (3).** The study of behavior that counters the culturally accepted norms or regularities. The social implications of deviancy are reviewed, and theoretical formulations regarding deviant behavior are analyzed.

**SYG 4003 Sociology through Film (3).** Popular and documentary films as data for the analysis of various sociological problems.

**SYO 3120 Marriage and the Family (3).** An introduction to the intensive study of the kinship relationship of man known as family. The family is distinguished from other special units, and behavior variations of this special unit are analyzed and associated with special functions. Contemporary manifestations of the family and the dynamic changes indicated are considered.

**SYO 3250 School and Society (3).** A specialized course dealing with the place of schools (particularly public) in society, the import of social criteria for school personnel, and the influence of such criteria on educational processes within the school system (institution).

**SYO 4130 Comparative Family Systems (3).** The study of family organization and function in selected major world cultures. Emphasis is given to the interrelationships of the family, the economic system, urbanization, and human development.

**SYO 4200 Sociology of Religion and Cults (3).** The study of religion's institutions, their structure and function in various societies. Leadership qualities, participation, and practices, and the relationship of religious institutions to other social institutions are studied.

**SYO 4300 Political Sociology (3).** The underlying social conditions of political order, political process, and political behavior are explored. Examples are drawn from empirical and theoretical studies of power, elites, social class and socialization.

**SYO 4360 Industrial Sociology (3).** Concentrated study of industrialization and the sociological theory involved. Manpower, unemployment, apprentice programs, and classificatory schemes are studied.

**SYO 4530 Social Stratification (Mobility) (3).** The study of society structured hierarchically with particular attention to the form and content of the various levels. Problems in the social order and differential human behaviors associated with stratification are analyzed.

**SYO 4571 The Problems of Bureaucracy in The Modern World (3).** The course deals with the micro-sociological problems of the internal organization of bureaucracies; the relation between bureaucracy and personality; the macro-sociological problems of the emergence of the bureaucratic form; bureaucratization and contemporary life; general problems of affluence; meaningless activity; ways to beat the bureaucracy; and bureaucracy and atrocity.

**SYO 4600 Sociology of Art and Literature (3).** This course approaches the question of art and society through an analysis of the social production of art; the relationship between imagination and society; the role of the artist; and the ideological impact of aesthetic theory.

**SYP 3000 The Individual in Society (3).** Introduction to the study of the individual as a social being, with particular emphasis on man's social origins, human perceptions, and the interaction of the individual and the group within society.

**SYP 3300 Collective Behavior (3).** The study of human behavior as found in relatively unstructured forms, such as crowds, riots, revivals, public opinion, social movements and fads. The interplay of such behavior and the rise of new norms and values is analyzed.

**SYP 3400 Social Change (3).** The study of major shifts in focus for societies or culture, and the indicators associated with such changes. Particular attention is given to the development of industrial societies and the dynamics involved for nations emerging from various stages of 'underdevelopment '.

**SYP 3520 Criminology (3).** An introduction to the study of criminal behavior, its evidence in society, society's reaction to the subjects involved, and the current state of theoretical thought on causality and treatment.

**SYP 3530 Delinquency (3).** An analysis of behavior which is extralegal, with major concentration on its appearance among young people (juveniles) and society's response. Particular emphasis is given to the dynamic thrusts being made in establishing juvenile rights as a distinct part of human or civil rights.

**SYP 4321 Mass Culture (3).** Analysis of the social, political and cultural impact of mass communications.

**SYP 4410 Social Conflict (3).** The study of conflict in society and its place in social relationships. A study of causes and resolutions, with particular emphasis on methods of resolution and their influence on social change.

**SYP 4421 Man, Society and Technology (3).** The study of contemporary society, man's role in it, and effects of technological change. A study of interrelationships, with special attention given to vocational study and instruction within the framework of the relationships perceived.

**SYP 4441 Sociology of the Underprivileged Societies (3).** An examination of the various theories concerning what is happening in the 'underdeveloped world.' The political, social, and economic events of these societies are subjected to sociological analysis.

**SYP 4600 Sociology of Art and Literature (3).** This course approaches the question of art and society through an analysis of: the social production of art; the relationship between imagination and society; the role of the artist; and the ideological impact of aesthetic theory.

**SYP 4601 Symbols and Society (3).** An analysis of the effect of culture on the individual and on society. The roles of popular and intellectual culture will be examined.

**SYP 4730 Sociology of Aging (3).** The social impact of aging on individual and group interaction patterns, particularly in the areas of retirement, family relations, community participation and social serv-

ices. Explores the major sociological theories of aging in light of current research.

**SYP 4740 Sociology of Death (3).** An introduction to 'death' as social phenomenon. Attention given to various approaches which systematically study death, with primary emphasis given to the sociological approach. Major attention is given to an exploration of attitudes toward death, and an assessment of the implications for the respective groups involved.

**SYP 5447 Sociology of International Development (3).** To introduce the basic concepts and questions of the field as applied to the international arena. To illustrate the common areas of social science analysis in dealing with questions of international development.

## Statistics

**Carlos W. Brain,** *Associate Professor and Chairperson*
**Ling Chen,** *Instructor*
**Gauri L. Ghai,** *Associate Professor*
**Ina Parks Howell,** *Lecturer*
**Laura Reisert,** *Instructor*
**Samuel S. Shapiro,** *Professor and Associate Dean*
**Hassan Zahedi-Jasbi,** *Associate Professor*
**Jyoti N. Zalkikar,** *Assistant Professor*

### Bachelor of Science

#### Lower Division Preparation

To qualify for admission to the program, FIU undergraduates must have met all the lower division requirements including CLAST, completed 60 semester hours, and must be otherwise acceptable into the program.

**Lower or Upper Division Preparation:** (17)

| | | |
|---|---|---|
| MAC 3311 | Calculus I | 3 |
| MAC 3312 | Calculus II | 5 |
| MAC 3313 | Multivariable Calculus | 3 |
| MAS 3105 | Linear Algebra | 3 |
| COP 2210 | Programming in PASCAL or | 3 |
| CGS 3420 | Programming for Engineers | |

#### Upper Division Program

**Required Courses:** (33)

| | | |
|---|---|---|
| STA 3163 | Statistical Methods I | 3 |
| STA 3164 | Statistical Methods II | 3 |
| STA 3321 | Introduction to Mathematical Statistics I | 3 |
| STA 3322 | Introduction to Mathematical Statistics II | 3 |
| STA 4202 | Introduction to Design of Experiments | 3 |
| STA 4234 | Introduction to Regression Analysis | 3 |
| STA 4664 | Statistical Quality Control | 3 |
| ENC 3210 | Technical Writing | 3 |

Six additional credit hours of approved statistics courses 6

Three additional credit hours in an approved statistics, mathematics, or computer science course 3

#### Electives

The balance of the 120 semester hour requirement for graduation may be chosen from any courses in the University approved by the student's advisor.

*Remarks:* The student must consult his or her advisor to determine which courses, in addition to the required courses listed above, satisfy the requirements for a statistics major. The following courses are not acceptable for credit toward graduation, unless a student has passed the course before declaring a statistics major: MAC 3233, STA 3013, STA 3033, STA 3111, STA 3112, STA 3122, STA 3123, STA 3132, and QMB 3150 (College of Business Administration).

### Minor in Statistics

**Lower or Upper Division Prepartion:** (11)

| | | |
|---|---|---|
| MAC 3311 | Calculus I | 3 |
| MAC 3312 | Calculus II | 5 |
| MAC 3313 | Multivariable Calculus | 3 |

**Upper Division Program:** (12)

**Required Courses**

| | | |
|---|---|---|
| STA 3163 | Statistical Methods I | 3 |
| STA 3164 | Statistical Methods II | 3 |
| STA 3321 | Introduction to Mathematical Statistics I | 3 |
| STA 3322 | Introduction to Mathematical Statistics II | 3 |

A grade of 'C' or higher in each of these courses is necessary for the minor.

*Remarks:* No courses in statistics, mathematics or computer sciences can be applied to more than one minor in these disciplines, nor can courses used to satisfy major requirements be used towards minor requirements. In the case where a course is required for both a major in the one area and a minor in another, the student should see his or her advisor for an appropriate substitution for the requirement of the minor.

### Certificate Program in Actuarial Studies

See section on certificate programs under College of Arts and Sciences.

### Course Description

#### Definition of Prefixes

MAP - Mathematics, Applied; STA - Statistics.

**MAP 5117 Mathematical and Statistical Modeling (3).** Study of ecological, probabilistic, and various statistical models. Prerequisites: MAC 3313, COP 2210 or CGS 3420, MAS 3105; and STA 3322 or STA 3164 or STA 3033.

**STA 1061 Introduction to SPSSX for Data Analysis (1).** Data coding and entry for use on the mainframe. How to input data, create variables, select subsets of data. Use procedures such as: LIST, FREQUENCIES, CROSSTABS, DESCRIPTIVES, MEANS and CORRELATIONS. Prerequisite: Basic Statistics, DCL and EDT.

**STA 1062 Introduction to SAS for Data Analysis (1).** Data coding for entry use on the mainframe. SAS Data step to input data, create variables, select subsets of data, PROCs such as: PRINT, FORMAT, MEANS, FREQ, SUMMARY, TEST, CORR, UNIVARIATE and PLOT. Prerequisite: Basic Statistics, DCL and EDT.

**STA 3013 Statistics for Social Services (3).** This is an elementary course in statistics, covering graphical and numerical condensation of data as well as the most basic parametric and non-parametric methods. Emphasis is placed on the interpretation of statistical results, rather than on ways to analyze experimental data. Prerequisite: MAC 2132 or MGF 1202 or Junior standing.

**STA 3033 Introduction to Probability and Statistics for CS (3).** Basic probability laws, probability distributions, basic sampling theory, point and interval estimation, tests of hypothesis, regression and correlation. Minitab will be used in the course. Prerequisite: MAC 3312.

**STA 3111 Statistics I (4).** Descriptive statistics, frequency distributions, probability distributions, point and interval estimation, hypothesis testing, one-way analysis of variance, correlation. Subsequent credit for STA 3122 or STA 3132 will not be granted. Prerequisite: MAC 2132 or MGF 1202 or Junior standing.

**STA 3112 Statistics II (2).** Analysis of variance, nonparametric methods, linear regression, analysis of categorical data. Computer software will be used. Subsequent credit for STA 3123 will not be granted. Prerequisite: MAC 2132 or MGF 1202 or Junior standing.

**STA 3122-STA 3123 Introduction to Statistics I and II (3-3).** A course in descriptive and inferential statistics. Topics include: empirical and theoretical probability distributions; point and interval estimation; hypothesis testing; analysis of variance, regression, correlation, and basic non-parametric tests.(Credit not allowed for both STA 3112 and STA 3123; Subsequent credit for STA 3132 or 3111 will not be granted for STA 3122).

**STA 3132 Business Statistics (3).** Starting with an introduction to probability, the course provides an introduction to statistical techniques used in management science. It includes descriptive statistics, probability distributions, estimation and testing of hypothesis. Subsequent credit for STA 3122 or STA 3111 will not be granted. Prerequisite: MAC 2132 or MGF 1202 or Junior standing.

**STA 3163-STA 3164 Statistical Methods I and II (3-3).** This course presents tools for the analysis of data. Specific topics include: use of normal distribution, tests of means, variances and proportions; the analysis of variance and covariance (including contrasts and components of variance models), regression, correlation, sequential analysis, and non-parametric analysis. Prerequisite: College algebra or first course in statistics.

**STA 3182 Statistical Models (3).** This is a specialized course in the use of statistical models to represent physical and social phenomena. The emphasis is on providing tools which will allow a researcher or analyst to gain some insight into phenomena being studied. An introductory knowledge of probability theory and random variables is assumed. Specific topics include: introduction to discrete and continuous probability distributions, transformation of variables, approximation of data by empirical distributions, central limit theorem, propagation of moments, Monte Carlo simulation, probability plotting, testing distributional assumptions. Prerequisites: MAC 3313 and first course in statistics.

**STA 3321-STA 3322 Introduction to Mathematical Statistics I and II (3-3).** This course presents an introduction to the mathematics underlying the concepts of statistical analysis. It is based on a solid grounding in probability theory, and requires a knowledge of single and multivariable calculus. Specific topics include the following: basic probability concepts, random variables, probability densities, expectations, moment generating functions, sampling distributions, decision theory, estimation, hypothesis testing (parametric and nonparametric), regression, analysis of variance, and design of experiments. Prerequisite: MAC 3313.

**STA 3905 Independent Study (VAR).** Individual conferences, assigned readings, and reports on independent investigations.

**STA 3930 Special Topics (VAR).** A course designed to give groups of students an opportunity to pursue special studies not otherwise offered.

**STA 3949 Cooperative Education In Statistics (1-3).** One semester of either part-time or full-time work in an outside organization. Limited to students admitted to the Co-Op program. A written report and supervisor evaluation are required of each student. Prerequisite: 2 courses in Statisitics and permission of Chairperson.

**STA 4102 Introduction to Statistical Computing (3).** Data manipulation and statistical procedures using popular software, simulation, and statistical algorithms. Prerequisites: STA 3164 or STA 3123 or STA 3112, and COP 2210 or CGS 3420.

**STA 4173-HSC 4510 Statistical Applications In Health Care (3).** A course in descriptive and inferential statistics for the Health Services. Topics include probability distributions, point and interval estimation, hypothesis testing, regression and correlation, and contingency table analysis. Prerequisite: STA 3013 or equivalent college mathematics course.

**STA 4202 Introduction to Design of Experiments (3).** Completely randomized, randomized block, Latin square, factorial, nested and related designs. Multiple comparisons. Credit will not be given for both STA 4202 and STA 5206. Prerequisite: STA 3322 ot STA 3164 or STA 3033 or (STA 3163 and STA 3321).

**STA 4234 Introduction to Regression Analysis (3).** Multiple and polynomial regression, residual analysis, model identification and other related topics. Credit will not be given for both STA 4234 and STA 5236. Prerequisite: STA 3164 or STA 3123 or STA 3112 and MAS 3105.

**STA 4502 Introduction to Nonparametric Methods (3).** Sign, Mann-Whitney U, Wilcoxon signed rank, Kruskal-Wallis, Friedman and other distribution-free tests. Rank correlation, contingency tables and other related topics. Credit for both STA 4502 and STA 5505 will not be granted. Prerequisite: First course in Statistics.

**STA 4664 Statistical Quality Control (3).** This course presents the simple but powerful statistical techniques employed by industry to improve product quality and to reduce the cost of scrap. The course includes the use and construction of control charts (means, percentages, number defectives, ranges) and acceptance sampling plans (single and double). Standard sampling techniques such as MIL STD plans will be reviewed. Prerequisite: Introductory course in Statistics.

**STA 4905 Independent Study (VAR).** Individual conferences, assigned readings, and reports on independent investigations.

**STA 4949 Cooperative Education In Statistics (1-3).** One semester of either part-time or full-time work, in an outside organization. Limited to students admitted to the Co-op program. A written report and supervisor evaluation are required of each student. Prerequisite: STA 3322, STA 3164 and permission of Chairperson.

**STA 5126/PSY 5206 Fundamentals of Design of Experiments (3).** CRD and RCB designs. Latin square designs. Factorial, nested and nested-factorial experiments. Fixed, random and mixed models. Split-plot designs. Covariance analysis. Prerequisites: STA 3123 or STA 3112 or equivalent.

**STA 5206 Design of Experiments I (3).** Design and analysis of completely randomized, randomized block, Latin square, factorial, nested and related experiments. Multiple comparisons. Credit for both STA 4202 and STA 5206 will not be granted. Prerequisite: STA 3322 or STA 3164 or STA 3033 or (STA 3163 and STA 3321)

**STA 5207 Topics in Design of Experiments (3).** This applied course in design of experiments covers topics such as split-plot design, confounding, fractional replication, incomplete block designs, and response surface designs. Prerequisite: STA 5206.

**STA 5236 Regression Analysis (3).** Simple, multiple and polynomial regression, analysis of residuals, model building and other related topics. Credit for

both STA 4234 and STA 5236 will not be granted. Prerequisites: STA 3164 or STA 3123 or STA 3112, and MAS 3105.

**STA 5446-STA 5447 Probability Theory I and II (3-3).** This course is designed to acquaint the student with the basic fundamentals of probability theory. It reviews the basic foundations of probability theory, covering such topics as discrete probability spaces, random walk, Markov Chains (transition matrix and ergodic properties), strong laws of probability, convergence theorems, and law of iterated logarithm. Prerequisite: MAC 3313.

**STA 5505 Nonparametric Methods (3).** Distribution-free tests: sign, Mann-Whitney U, Wilcoxon signed rank, Kruskal-Wallis, Friedman, etc. Rank correlation, contingency tables and other related topics Credit for both STA 4502 and STA 5505 will not be granted. Prerequisite: First course in statistics.

**STA 5676 Reliability Engineering (3).** The course material is designed to give the student a basic understanding of the statistical and mathematical techniques which are used in engineering reliability analysis. A review will be made of the basic fundamental statistical techniques required. Subjects covered include: distributions used in reliability (exponential, binomial, extreme value, etc.); tests of hypotheses of failure rates; prediction of component reliability; system reliability prediction; and reliability apportionment. Prerequisite: STA 3322.

**STA 5800 Stochastic Processes for Engineers (3).** Probability and conditional probability distributions of a random variable, bivariate probability distributions, multiple random variables, stationary processes, Poisson and normal processes. Prerequisites: STA 3033, MAC 3313, MAP 3302.

**STA 5826 Stochastic Processes (3).** This course is intended to provide the student with the basic concepts of stochastic processes, and the use of such techniques in the analysis of systems. Subjects include: Markov Processes, queueing theory, renewal processes, birth and death processes, Poisson and Normal processes. Applications to system reliability analysis, behavioral science, and natural sciences will be stressed. Prerequisite: STA 5447.

**STA 5906 Independent Study (VAR).** Individual conferences, assigned reading, and reports on independent investigation.

## Theatre and Dance

**Marilyn Skow,** *Associate Professor and Chairperson*
**Patrice Bailey,** *Lecturer*
**Lee Brooke,** *Assistant Professor*
**Jane Carrington,** *Assistant Professor*
**Philip Church,** *Associate Professor*
**Rocco Cifone,** *Lecturer*
**Eric Engdahl,** *Visiting Assistant Professor*
**Richarch Gamble,** *Associate Professor*
**David (Zak) Herring,** *Assistant Professor*
**Deborah Kinghorn,** *Visiting Assistant Professor*
**Leslie Neal,** *Assistant Professor*
**Mary Ellen O'Brien,** *Assistant Professor*
**Brian Schriner,** *Visiting Lecturer*
**Andrea Seidel,** *Visiting Assistant Professor*
**Therald Todd,** *Associate Professor*

### Bachelor of Fine Arts

The goal of the theatre program is to provide intensive theatre training through classes and productions conducted with professional theatre discipline and the highest possible aesthetic standards. In addition to completion of course work, theatre majors are required to participate in all of the major productions presented while the student is enrolled in the Theatre Program.

Students will complete the core courses and select a specialization in either Acting or Production.

The degree requirements represent a four year program. Upper division transfers must have their lower division preparation evaluated by the department and will be advised accordingly.

To qualify for admission to the program, FIU undergraduates must have met all the lower division requirements including CLAST, completed 60 semester hours, and must be otherwise acceptable into the program.

Students for whom English is a second language must have a minimum TOEFL score of at least 550 plus an interview with department personnel to determine adequacy of English writing and speaking skills for the major.

**Required Courses:** (46 semester hours)

| | | |
|---|---|---|
| THE 2020 | Theatre Principles | 3 |
| TPP 2110 | Acting I | 3 |
| TPP 2282 | Theatre Speech and Movement I | 2 |
| TPP 3111 | Acting II | 3 |
| TPP 3283 | Theatre Speech and Movement II | 2 |
| TPA 3060 | Scenic Design I | 3 |
| TPA 2210 | Stagecraft I | 3 |
| TPA 3220 | Stage Lighting I | 3 |
| TPA 3230 | Stage Costuming I | 3 |
| TPA 3250 | Stage Make-up | 3 |
| TPA 3290L | Technical Theatre Lab I | 1 |
| TPA 3291L | Technical Theatre Lab II | 1 |
| TPA 3292L | Technical Theatre Lab III | 1 |
| TPA 3293L | Technical Theatre Lab IV | 1 |
| TPP 3310 | Directing | 3 |
| TPP 3650 | Playscript Analysis | 3 |
| THE 4111 | Theatre History I | 3 |
| THE 4112 | Theatre History II | 3 |
| THE 4970 | Senior Project | 1 |

**Additional required courses for the Acting specialization:** (55 semester hours):

| | | |
|---|---|---|
| TPP 3112 | Acting III | 3 |
| TPP 4113 | Acting IV | 3 |
| TPP 4820 | Actor's Workshop | 3 |

**Additional required courses for the Production specialization:** (55 semester hours):

| | | |
|---|---|---|
| TPA 3930 | Special Topics in Technical Production | 3 |
| TPA 4400 | Theatre Management | 3 |

and one course selected from the following: 3

| | |
|---|---|
| TPA 4061 | Scenic Design II |
| TPA 4201 | Stagecraft II |
| TPA 4221 | Stage Lighting II |
| TPA 4231 | Stage Costuming II |

### Minor in Theatre

**Required Courses:** (24 semester hours)

| | | |
|---|---|---|
| THE 2020 | Theatre Principles | 3 |
| TPP 2110 | Acting I | 3 |
| TPP 2282 | Stage Voice & Movement | 2 |
| TPA 3290L | Tech Theatre Lab I | 1 |
| Theatre Electives (upper division) | | 15 |

A grade of 'C' or higher in all required courses for graduation.

### Minor in Dance

**Required Courses:** (20 semester hours minimum)

| | | |
|---|---|---|
| DAA 1200 | Ballet Technique I | 2 |
| DAA 2202 | Ballet Technique II | 3 |
| DAA 1100 | Modern Dance Technique I | 2 |
| DAA 1500 | Jazz Dance Technique I | 2 |

Five credit hours of additional study in dance techniques.

Six credit hours to be selected from the following:

| | | |
|---|---|---|
| DAA 3700 | Dance Composition I | 2 |
| MUH 1011 | Music Appreciation | 3 |
| DAN 2100 | Introduction to Dance | 3 |
| THE 2020 | Theatre Principles | 3 |
| TPA 3290L | Technical Theatre Lab I | 1 |

| | | |
|---|---|---|
| DAA 3420 | Dance Repertory | 1-2 |
| DAE 3371 | Dance in the Elementary and Middle School | 3 |
| DAE 4362 | Dance in the Middle and Secondary School | 3 |
| TPA 4400 | Theater Management | 3 |
| PET 3310 | Kinesiology | 3 |

## Course Descriptions

### Definition of Prefixes

DAA-Dance Activities; ORI-Oral Interpretation; SPC-Speech Communication; THE-Theatre; TPA-Theatre Production and Administration; TPP-Theatre- Performance and Performance Training.

**DAA 1100 Modern Dance Technique I (2).** Development of techniques and understanding of the art form of contemporary dance. May be repeated.

**DAA 1101 Modern Dance Technique I-2 (2).** A continuation of Modern Dance Technique I with emphasis on vocabulary, movement, rhythm and alignment. May be repeated. Prerequisite: DAA 1100 or permission of instructor.

**DAA 1200 Ballet Technique I (2).** Development of techniques and understanding of ballet. May be repeated.

**DAA 1201 Ballet Technique I-2 (2).** A continuation of Ballet Technique I with an emphasis on vocabulary, movement skill and alignment. May be repeated. Prerequisite: DAA 1200 or permission of instructor.

**DAA 1500 Jazz Dance Technique (2).** Development of the dance techniques and understanding of jazz dance. May be repeated.

**DAA 2102 Modern Dance Technique II (2-3).** A continuation of basic techniques and understanding of the art form of contemporary dance. Prerequisite: DAA 1100 or permission of instructor. May be repeated.

**DAA 2103 Modern Dance Technique II-2 (2-3).** A continuation of Modern Dance Technique II with further emphasis on style and phrasing. Prerequisite: DAA 2102 or permission of instructor.

**DAA 2202 Ballet Technique II (2-3).** A continuation of Ballet Technique II with increasing complexity of combinations. Emphasis on correct execution of basics and musicality. May be repeated. Prerequisite: DAA 2202 or permission of instructor.

**DAA 2203 Ballet Technique II-2 (2-3).** A continuation of the basic techniques and understanding of ballet. Prerequisite: DAA 2202 or permission of instructor. May be repeated.

**DAA 3104 Modern Dance Technique III (3).** A continuation of Modern Dance I and II with an emphasis on skills in movement style and phrasing necessary to perform modern dance repertory. Prerequisite: DAA 2102 or permission of instructor.

**DAA 3105 Modern Dance Technique III-2 (3).** A continuation of Modern Dance Technique III with an emphasis on skills in movement style and phrasing necessary to perform modern dance repertory. Prerequisite: DAA 3104 or permission of instructor.

**DAA 3190 Modern Dance for the Theater II (3).** Training of the body through the study of modern dance vocabulary as developed by the originators of this dance form in the twentieth century. Concentration on alignment, rhythm and phrasing. Prerequisite: DAA 2191.

**DAA 3191 Modern Dance for the Theater II-2 (3).** Advanced training of the body through the study of modern dance vocabulary as developed by the originators of this dance form in the twentieth century. Concentration on dynamics, phrasing and improvisation. Prerequisite: DAA 3190.

**DAA 3204 Ballet III (3).** A continuation of Ballet I & II with an emphasis on developing strength & coordination in more complex movement. Additional work on phrasing, quality of movement, musicality and performance style. Prerequisite: DAA 2202 or permission of instructor.

**DAA 3205 Ballet Technique III-2 (3).** A continuation of Ballet Technique III with an emphasis on strength and form. Introduction of pointe work. Center practice in balance, jumps, beats and turns. Prerequisite: DAA 3204 or permission of instructor.

**DAA 3220 Pointe Technique (1).** Introduction of fundamentals for development of pointe technique. May be repeated. Prerequisite: Permission of Instructor.

**DAA 3420 Dance Repertory (2).** The study and practice of works in repertory. May be repeated. Prerequisite: Permission of instructor.

**DAA 3480 Dance Repertory III (2).** The study and practice of selected works of dance repertory.

**DAA 3501 Jazz Dance Technique II (3).** A continuation of Jazz I with emphasis on quickness and musicality when executing complex combinations of movements.

**DAA 3600 Tap (2).** Designed for students interested in learning the skills and techniques of tap dancing.

**DAA 3700 Dance Composition I (2).** A study of the principles of composition - emphasis on improvisation to explore structure and form in dance. Prerequisite: Permission of instructor.

**DAA 3701 Dance Composition II (2).** A continuation of Composition I with an emphasis on exploring movement potential and structuring of dance forms. Prerequisite: DAA 3700 or permission of instructor.

**DAA 3702 Dance Composition & Improvisation III (2).** A further exploration of choreography for the group form. Students will be required to take a concept and complete a work for showing and critique. Prerequisite: DAA 3701 or permission of instructor.

**DAA 3703 Dance Composition & Improvisation IV (2).** Students work on extended choreographic projects with an eye toward developing material for their senior project. Prerequisite DAA 3702 or permission of instructor.

**DAA 3720 Commercial Choreography (2).** An intermediate/advanced course in the styles of movement used for Broadway shows, industrials, and film work. This is a studio performance course.

**DAA 3880 Pilates (2).** A system for developing optimum strength and alignment through weights and floor exercises.

**DAA 3950 Dance Ensemble (1).** An auditioned performing and production laboratory. Permission of instructor.

**DAA 4106 Modern Dance Technique IV (3).** Advanced modern dance techniques with the major focus on dance as an art form using the body as a medium of expression. Prerequisite: DAA 3104 or permission of instructor.

**DAA 4107 Modern Dance Technique IV-2 (3).** A continuation of Modern Dance Technique IV with the major emphasis on performance skills. Prerequisite: DAA 4106 or permission of instructor.

**DAA 4206 Ballet Technique IV (3).** Further development of strength and form with emphasis placed on perfecting the execution of the classical ballet technique. Prerequisite: DAA 3204 or permission of instructor.

**DAA 4207 Ballet Technique IV-2 (3).** A continuation of Ballet Technique IV with an emphasis on developing individual performance styles. Prerequisite: DAA 4206 or permission of instructor.

**DAA 4362 Spanish Dance (2).** This course explores the basics of three theatre styles of Spanish dance.

**DAA 4422 Dance Repertory IV (2).** The study and practice of selected works of dance repertory.

**DAA 4502 Jazz Dance Technique III (3).** A continuation of jazz dance techniques and skills with increased emphasis on developing complex dance combinations and full routines.

**DAA 4790 Dance Senior Project (3).** Designed to provide the advanced dancer with experience in choreographing a suite of original dances and performing and producing an entire dance concert.

**DAN 1603 Music for Dance (2).** The connection of musical structure and body movement will be explored in improvisational dance composition exercises. The basic elements of rhythm, tempo and meter will be studied.

**DAN 2100 Introduction to Dance (3).** A study of western dance, introducing its history and its contemporary forms leading to an awareness and appreciation of the art of dance through movement, lecture, and film.

**DAN 3720 Anatomy for Dance with Lab (4).** An overview of the anatomy and physiology of the body explaining how certain anatomical structures and physiological processes interact in order to execute movement in a safe and effective manner.

**DAN 3730 Kinesiology and Injury Prevention for Dance (3).** A study of the body in motion. Students will apply their knowledge of anatomy to the moving dancer's body.

**DAN 4111 Dance History I (3).** An introduction to the history of western and non-western dance from its beginnings to the present time.

**DAN 4112 Dance History II (3).** A continuation of Dance History I. In depth, historical survey of a particular time or style. Prerequisite: DAN 4111 or permission of instructor.

**DAN 4512 Dance Production (2).** This course prepares dancers for all aspects of dance concert production including lighting, costuming, props, set designs, budget management, and publicity.

**DAN 4513 Dance Production II (2).** Assigned problems in connection with current dance theater production.

**DAN 4612 Literature & Materials of Music for Dance III (3).** A survey of the history of music and its relation to dance; touching on the Greek heritage and continuing through the Renaissance to the common practice period and finally to the multiplicity of 20th-Century style.

**DAN 4613 Literature & Materials of Music for Dance IV (3).** The composition of simple musical works utilizing the skills acquired. A development of personal musical interests as preparation for choreographers/artists.

**DAN 4932 Dance Ethnology (3).** A special topics course which will study a specific dance culture from an historical, sociological and anthropological viewpoint. Topic will vary from semester to semester.

**ORI 2002 Intermediate Oral Interpretation (3).** A continuation of the basic techniques of oral interpretation with emphasis on program development. Programs will include poetry, prose, and drama. Prerequisite: ORI 3000.

**ORI 3000 Basic Oral Interpretation (3).** Development of the voice as an instrument for expressive interpretation of literature.

**PGY 3020 Introduction to Film-Making (3).** For the beginning student of film making. Survey of the origins and development of cinematography as an art form. Presentation and technical analysis of selected films.

**SPC 2600 Public Speaking (3).** Study of the principles of ethical and effective public speaking, with practice in the construction and delivery of original speeches before an audience.

**SPC 3513 Argumentation and Debate (3).** Lectures and activities concerned with audience-centered reasoning. Topics include: Nature of argument, analysis, reasoning, evidence, values, and building and refuting arguments. Prerequisite: SPC 2600 or permission of instructor.

**THE 2000 Theatre Appreciation (3).** A study of theatre: process and product, introducing the past of theatre, its literature and traditions; and the means by which theatre is produced: acting, directing and visual design.

**THE 2020 Theatre Principles (3).** An intensive introduction to theatre, its nature, history and production processes. For theatre majors and minors or students with theatre background.

**THE 3051 Children's Theatre (3).** Techniques of selection, production, and performance of plays for children.

**THE 4110 Theatre History I (3).** The development of the theatre from its origins to the early 19th century.

**THE 4111 Theatre History II (3).** The development of the theatre from early 19th century to the present.

**THE 4370 Modern Dramatic Literature (3).** Intensive play reading and discussion from early modern through contemporary.

**THE 4820 Creative Dramatics (3).** The study of informal drama activity with children. Techniques of improvisation, sense recall, music, and movement are employed.

**THE 4916 Research (1-5).** Supervised individual investigation of special research projects. Credit will vary with the nature and scope of the project. May be repeated.

**THE 4950 Theatre Internship (1-15).** Supervised internship in a professional company in acting, directing, stage management, design, technical theatre, or theatre management.

**THE 4970 Senior Project (1).** Preparation of a final creative project in the student's area of emphasis under the direction of a faculty advisor. Must be taken twice. Prerequisite: Permission of Instructor. Theatre majors only.

**TPA 2210 Stagecraft I (3).** An introduction to construction techniques used in stage. Direct experience with wood and metal working tools, blueprint reading, and various materials including wood, metal, plastics and fabrics. Lecture and laboratory. Prerequisite: Prior arrangement with advisor.

**TPA 3060 Scenic Design I (3).** Fundamentals of designing effective settings for the play. Discussion and practice in: analysis, research, the creation of appropriate and exciting environments for the actor, and basic skills in rendering and model making. Prerequisite (for Theatre majors): TPA 2210.

**TPA 3071 Stage Rendering (3).** An introduction to the techniques used in rendering scenery and costume design concepts. Recommended as preparation for TPA 3060 and TPA 4230.

**TPA 3220 Stage Lighting (3).** Familiarization with stage lighting equipment, purposes, and aesthetics of stage light-

ing; development of an approach to designing lighting; practical experience in the use of equipment. Lecture and laboratory.

**TPA 3230 Stage Costuming I (3).** Fundamentals of costume design. Study of period, character, and concept. Familiarization with fabrics and techniques of construction and trim.

**TPA 3250 Stage Make-up (3).** Fundamentals of straight and character makeup. Use of greasepaint and three dimensional techniques.

**TPA 3290L Technical Theatre Lab I (1).** Supervised crew work in construction, painting, lighting, costuming, and running major productions. Required of Theatre majors.

**TPA 3291L Technical Theatre Lab II (1).** Supervised crew work. Required of Theatre majors.

**TPA 3292L Technical Theatre Lab III (1).** Supervised crew work. Required of Theatre majors.

**TPA 3293L Technical Theatre Lab IV (1).** Supervised crew work. Required of Theatre majors. Prerequisite: TPA 3292L.

**TPA 3930 Special Topics in Technical Production (1-3).** Lecture-lab studies in particular areas of theatre production, one area per semester, including stage management, prop making, sound design, special effects.

**TPA 4061 Scenic Design II (3).** Advanced skills in setting the mood of, and creating movement through a theatrical space. Emphasis will be placed upon rendering techniques and model making. Prerequisite: TPA 3060.

**TPA 4201 Stagecraft II (3).** Advanced problems in the construction and movement of scenery, properties, and special effects. Prerequisite: TPA 3200.

**TPA 4221 Stage Lighting II (3).** Advance work in lighting of the stage. Emphasis is on practical training and experience through drafting of light plots accompanied by discussion and evaluation. Prerequisite: TPA 3220.

**TPA 4231 Stage Costuming II (3).** Advanced skills in designing, rendering, and construction of costumes. Includes pattern making and charting the show. Prerequisite: TPA 3230.

**TPA 4400 Theatre Management (3).** Survey of all aspects of theatre administration: budget planning and maintenance; public relations; box office and house management; unions and contracts.

**TPP 2100 Introduction to Acting (3).** An introduction to the acting process. Self awareness, physical and vocal control, basic stage technique and beginning scene work will be studied. Intended for the student with little or no acting experience.

**TPP 2110 Acting I (3).** Development and training of basic skills: use of self, stage terminology, stage voice and movement. Intended for the serious theatre student. Prerequisite: Permission of instructor. Corequisite: TPP 2282.

**TPP 2282 Theatre Speech & Movement I (2).** Development of the actor's two main instruments: the voice and the body. Corequisite: TPP 2110.

**TPP 3111 Acting II (3).** A continuation of the development and training of basic skills: improvisation, scripted dialogues, voice and movement. Use of self in scene work. Prerequisite: TPP 2110 and TPP 3283 and permission of instructor.

**TPP 3112 Acting III (3).** Continuation of the development and training of acting skills with an emphasis on characterization. Prerequisites: TPP 3111 and permission of instructor.

**TPP 3114 Acting III/2 (3).** A continuation of the third level acting course with emphasis on beginning the development of the professional actor's knowledge of theater repertoire. Prerequisite: TPP 3112.

**TPP 3164 Voice and Movement III (3).** Intensive training in effort-shape techniques leading to a more elaborate physical building of the character. Prerequisite: TPP 2713. Corequisite: TPP 3112.

**TPP 3165 Voice and Movement III/2 (3).** A continuation of the vocal and physical training required in TPP 3284 with an emphasis on the handling of Shakespearean verse and gaining professional skills in stage combat and period dance. Prerequisite: TPP 3284. Corequisite: TPP 3113.

**TPP 3250 Musical Theatre Workshop (3).** An introduction to Musical Comedy performance: integration of the dramatic, musical and movement components will be studied through work on selected scenes.

**TPP 3253 Musical Theater III (3).** Intense musical theatre practice to sharpen the professional skills of acting, singing and dancing. Study in depth of concepts and practice of different musical theatre pieces. Prerequisite: TPP 3250.

**TPP 3281 Acting for Dance (2).** The fundamentals of stage performance stressing voice as well as movement.

**TPP 3283 Theatre Speech & Movement II (2).** A continuation of the development of the actor's voice and body. Prerequisite: Permission of instructor. Corequisite: TPP 3111.

**TPP 3310 Directing (1).** Basic principles of play direction; including problems of selecting, analyzing, casting, and rehearsing plays. Prerequisites: TPP 3111 and TPP 3650.

**TPP 3650 Playscript Analysis (3).** Detailed playscript examination for directors, actors and designers, focusing on identification of those elements upon which successful theatre production depends.

**TPP 3730 Dialects (3).** A study of dialects common to western theatre.

**TPP 4311 Directing II (3).** A continued study of direction techniques culminating in the preparation of a play for public performances. Prerequisite: TPP 3310.

**TPP 3655 Scene Study III (3).** A continuation of playscript examination focusing on the various types of dramatic structures, the characteristics of genres and styles of plays from different periods of theatre history. Prerequisite: TPP 2654.

**TPP 3656 Scene Study IV (3).** Advanced work in playscript analysis with emphasis on the techniques of scoring the play and all phases of the actor's preparation for professional rehearsal. Prerequisite: TPP 3651.

**TPP 4113 Acting IV (3).** Continuation of the development and training of acting skills with emphasis on a variety of styles. Prerequisites: TPP 3112 and permission of instructor.

**TPP 4117 Acting IV/2 (3).** Advanced acting techniques practiced in a repertory company situation. Exposure to variety of roles for full production of plays. Prerequisite: TTP 4404.

**TPP 4311 Directing II (3).** A continued study of directing techniques culminating in the preparation of a play for public performance. Prerequisite: TPP 3310.

**TPP 4531 Stage Combat (3).** A study of combat techniques for the stage, including fencing, boxing, wrestling, and tumbling.

**TPP 4600 Playwriting (3).** Study of the theory and principles of writing plays for

the stage. Practice in writing either the short or long play. May be repeated.

**TPP 4601 Playwriting II (3).** A continuation of the study of the theory and principle of writing plays for the stage. Actual practice in writing plays. Prerequisite: TPP 4600.

**TPP 4920 Actor's Workshop (3).** This course will concentrate on the acting demands of a specific period, style, genre, or playwright. Prerequisite: TPP 4113 or permission of instructor.

**TPP 4921 Actor's Workshop II (3).** Special attention to the acting demands of a specific period, style, genre or playwright or combinations thereof. Prerequisite: TPP 4820.

**TPP 4952 Repertory Company I (12).** A repertoire group representing a professional level production of a season of plays, presenting a variety of theatre periods and styles. Prerequisite: Permission of instructor.

**TPP 4953 Repertory Company II (12).** A continuation of practice in a repertoire group presenting professional level productions of a variety of plays.

## Visual Arts

**William Maguire,** *Professor and Chairperson*
**Ralph F. Buckley,** *Associate Professor*
**William Burke,** *Associate Professor*
**James M. Couper III,** *Professor*
**Carol Damian,** *Instructor*
**Eduardo Del Valle,** *Associate Professor*
**Richard Duncan,** *Associate Professor*
**Mirta Gomez,** *Associate Professor*
**Ellen Jacobs,** *Professor*
**Juan Martinez,** *Instructor*
**Dahlia Morgan,** *Lecturer/Art Museum Director*
**Manuel Torres,** *Associate Professor*
**Barbara Watts,** *Assistant Professor*
**Sandra Winters.** *Assistant Professor*

### Bachelor of Fine Arts

### Lower Division Preparation

#### Required Courses

| | |
|---|---|
| Art Survey I & II | 6 |
| 2-D and 3-D Design | 6 |
| Basic Drawing and Figure Drawing | 6 |
| Beginning Studio Courses | 6 |

#### Recommended Studio Courses

Painting, Sculpture, Printmaking, Ceramics, Photography, Jewelry, Glass, Drawing.

*Remarks:* The student who does not have an A.A. degree or who lacks proficiency in required courses, or both, will be expected to take more than 60 semester hours to complete the bachelor's degree, or to make up courses at the lower division level.

To qualify for admission to the program, FIU undergraduates must have met all the lower division requirements including CLAST, completed 60 semester hours, and must be otherwise acceptable into the program.

### Visual Arts Scholarships

All Visual Arts scholarships are awarded as a result of the faculty's Spring Review, usually in April. Students should contact the department at 348-2897 for information on procedures for participation in the Spring Review.

### Upper Division Program (60)

Required Courses: (48)

| | | |
|---|---|---|
| ARH 4450 | 20th Century Art | 3 |
| ARH 4470 | Contemporary Art | 3 |
| ARH Elective (upper division) | | 6 |
| Studio Major | | 15-18 |
| ART Thesis I & II | | 6 |
| ART & ARH Electives outside Studio Concentration | | 15-18 |
| Electives outside of Visual Arts Department | | 9-12 |

### Minor in Visual Arts

(18 semester hours)

| | | |
|---|---|---|
| ARH 4450 | 20th Century Art | 3 |
| ART 3310 | Drawing | 3 |
| | or | |
| ART 3331 | Figure Drawing | |
| ART Studio Electives (upper division) | | 12 |

### Minor in Art History

(18 semester hours)

| | | |
|---|---|---|
| ARH 4450 | 20th Century Art | 3 |
| ARH 4470 | Contemporary Art | 3 |
| ART Studio Elective (upper division) | | 3 |
| ARH Electives (upper division) | | 9 |

## Course Descriptions

#### Definition of Prefixes

ARH-Art History; ART-Art; PGY-Photography.

**ARH 2050 Art History Survey I (3).** A broad survey of the visual arts and architecture from the Paleolithic Period through the Middle Ages.

**ARH 2051 Art History Survey II (3).** A broad survey of the visual arts and architecture from the Renaissance through the Modern Age.

**ARH 3009 Survey of Contemporary Art (3).** A survey of the most recent developments in the fields of visual arts and architecture, through lectures, films and speakers. Open to all students.

**ARH 3210 Early Christian and Byzantine Art (3).** The art of Byzantine Empire from the early Christian period and the foundation of Constantinople to the Ottoman conquest and afterward (300-1500 A.D.). Prerequisite: ARH 2050 or permission of instructor.

**ARH 3350 Baroque Art (3).** European art of the 17th and early 18th centuries. Artists to be studied include Bernini, Caravaggio, Velasques, Vermeer, Rembrandt, Rubens, Poussin, La Tour, and Watteau. Prerequisite: ARH 2051.

**ARH 4014 History of Decorative Arts (3).** A survey of the more important and influential periods in history in the production of ceramics, fabrics, glass, jewelry and silversmithing. Slides, lectures, student research.

**ARH 4131 Greek Art (3).** Lectures, slides, research. The Art of Greece from the Bronze Age through the Classical Period.

**ARH 4151 Roman Art (3).** Lectures, slides, research. The Art of Ancient Rome from the Early Iron Age through the Late Roman Empire.

**ARH 4310 Early Italian Renaissance (3).** Lectures, slides, research. From the origins of Italian Renaissance in the Late Gothic Period to the Early 15th Century.

**ARH 4311 The Art of Venice: The Rise of a Mediterranean Superpower (3).** Analysis of artistic aspects of Venice's growth to power. Emphasis on the church of St. Mark and the Venetian National Shrine.

**ARH 4312 Later Italian Renaissance (3).** Lectures, slides, research. The Art of Italy in the later 15th and 16th Century.

**ARH 4400 Primitive Art (3).** An introduction to the art of widely dissimilar groups from areas on the margin or beyond the cultural influences of Europe, the Near East, India, China, and Japan. Emphasis will be placed on African, Oceanic, and North American Indian Art.

**ARH 4430 Art and Politics (3).** An investigation into the interrelationship between art and political issues, with

emphasis on the 19th and 20th centuries.

**ARH 4431 19th Century Painting (3).** A study of Neoclassicism, Romanticism, Realism, and Impressionism. Artists to be considered include David, Ingres, Gericault, Delacroix, Goya, Courbet, Manet, Degas, Monet, and Renoir.

**ARH 4450 20th Century Art (3).** Lectures, films, slides. A survey of European and American Art from 1890-1945.

**ARH 4470 Contemporary Art (3).** Lectures, slides, visitors and student research. A survey of art from 1945 to the present.

**ARH 4552 Art of China and Japan (3).** An introduction to the art of China to the Ming Dynasty and of Japan through the 18th century. The emphasis will be on painting and sculpture, with some ceramics and architecture.

**ARH 4610 American Art (3).** A survey of American painting from the Colonial period to the eve of World War I. Artists to be studied include Copley, West, Cole, Whistler, Sargent, Homer, Henri, and Bellows.

**ARH 4611 North American Indian Art (3).** A survey of native North American art history with emphasis on the post-contact period. The arts of the far north, Northwest coast, southwest, plains and the eastern woodlands.

**ARH 4650 Pre-Columbian Art (3).** Slides, lectures, research. A survey of Pre-Colombian Art from approximately 2000 B.C. to 1500 A.D. of Mesoamerica. (Intermediate area from Honduras to Columbia and the Andes).

**ARH 4652 Pre-Columbian Art of the Andes (3).** A survey of Andean Pre-Colombian art and architecture. Basic characteristics of technique, style and iconography in relation to Andean socio-economic and cultural patterns.

**ARH 4670 20th Century Latin American Art (3).** Lectures, films, slides. The Art of Central, South America and the Caribbean of the Twentieth Century.

**ARH 4710 History of Photography (3).** A chronological examination of the work of the world's most significant photographers, from photography's invention in the 1830's to the present.

**ARH 4832L Art Gallery and Display (1-3).** The study and participation of all aspects of Gallery operations, from daily operation to special exhibitions and events. Permission of Gallery Director.

**ARH 4905 Directed Studies (1-6).** A group of students, with the approval of the art faculty, may select a master teacher of theory, research or criticism in selected areas as film, painting, sculpture, architecture, crafts, art history, multi-media art, etc. Arrangements must be made at least a semester before course is offered. May be repeated.

**ARH 4910C Research (1-6).** Art history, criticism, and theory in areas not covered by the present program and which the student wishes to study. Prerequisite: Permission of instructor. May be repeated.

**ARH 4931 Women and Art (3).** Women in the history of art; past, present and future. Slides, lectures, films, panels and discussions.

**ARH 5907 Directed Studies (1-6).** A group of students, with the approval of the art faculty, may select a master teacher of theory, research or criticism in selected areas as film, painting, sculpture, architecture, crafts, art history, multi-media art, etc. Arrangements must be made at least a semester before course is offered. May be repeated.

**ARH 5913 Research (1-6).** Art history, criticism, and theory in areas not covered by the present program and which the student wishes to study. Prerequisite: Permission of instructor. May be repeated.

**ART 1202C 2D Design (3).** Studio course introducing the basic art elements such as line, value, and color to develop the students vocabulary and awareness of two-dimensional potential in various media.

**ART 1203C 3D Design (3).** Studio course introducing the basic elements inherent in three-dimensional works of art. Shape, mass, balance, proportion, and scale are elements which will be explored.

**ART 3111C Ceramics (3).** A beginning course for art and non-art majors. Fundamentals of throwing, hand-building, and glaze application. May be repeated.

**ART 3112C Intermediate Ceramics (3).** An in-depth study of ceramic forms concentrating on wheel techniques focusing on functional design, glazing and applicable firing processes. Prerequisite: ART 3111C.

**ART 3115C Low Temperature Ceramics (3).** An in- depth study of low-temperature clays and glazes, and exploration of a variety of glazing and firing techniques, including lustres, residual salt, raku, white and red earthenware, etc. Prerequisite: ART 3111C.

**ART 3133C Fabrics and Fibers (3).** A creative approach to fabrics and fibers, using processes such as dyeing, embroidery, quilting, soft sculpture, batik, on and off loom weaving, etc. May be repeated.

**ART 3150C Jewelry and Metals (3).** A study of basic metal techniques and strengthening of three-dimensional design concepts for the beginner. The advanced student will explore the more difficult technical aspects of areas such as hollow ware, enameling, casting, and stone setting. May be repeated.

**ART 3163C Glassblowing (3).** A basic course in off-hand glass blowing, concerned with preparing, forming, and finishing glass; understanding of glass as an art form; operation and maintenance of a glass studio. May be repeated.

**ART 3310C Drawing (3).** Drawing will be considered as an essential part of every art student's curriculum. Depending on his lower level work, a student will be encouraged to take at least one drawing course at the University. Off-campus studio work may be arranged. May be repeated.

**ART 3331C Figure Drawing (3).** Drawing from the model during assigned studio time. Open to all students. May be repeated. Prerequisite: ART 3310.

**ART 3401C Printmaking (3).** With a knowledge of basic intaglio and relief printing, the student will explore specific media such as etching, lithography, silk-screen and other experimental techniques. May be repeated.

**ART 3510C Painting (3).** Stresses development of idea and technique in creating paintings. Demonstration, lecture, field trips and critiques included. Strong emphasis on individual development. Prerequisites: ART 1202C and ART 3310C. May be repeated.

**ART 3702C Sculpture (3).** With a background in beginning sculpture, the student will develop standards of excellence, both in concept and technique, with stress on individual expression. An equipped shop will be available to the student. May be repeated.

**ART 3711C Figure Sculpture (3).** A basic sculpture class emphasizing anatomical study with 2 & 3 dimensional rendering in clay, training the student to observe and accurately model the human figure.

**ART 3830C Color Theory (3).** This course is designed to familiarize the stu-

dent with the theory and principles of color as it relates to the arts. Lecture, demonstration, and application through assigned projects will be included.

**ART 3831C Materials and Techniques (3).** Instruction in the craft of painting. Demonstration and exercise in the following will be included: color, pigments, ground, all major media, studio and equipment.

**ART 3949C Cooperative Education in Visual Arts (3).** A student majoring in Visual Arts may spend several semesters fully employed in industry in a capacity relating to the major. Prerequisite: Permission of chairperson.

**ART 4114C Ceramics (3).** The advanced student will explore all aspects of expression in clay and glaze. Students will be expected to be mostly self-directed. Prerequisite: ART 3111C, or permission of the instructor. May be repeated.

**ART 4116C Glaze and Clay Calculation (3).** The study of the nature, formulation and altering of ceramic glazes and clays.

**ART 4133C Fabrics and Fibers (3).** See ART 3133C.

**ART 4151C Jewelry and Metals (3).** See ART 3150C.

**ART 4164C Glassblowing (3).** See ART 3163C.

**ART 4320C Drawing (3).** See ART 3310C.

**ART 4332C Figure Drawing (3).** See ART 3331C.

**ART 4402C Printmaking (3).** See ART 3401C.

**ART 4532C Painting (3).** An advanced course concentrating on conceptual clarity and the realization of stylistic development. Group, individual criticism will be emphasized. May be repeated. Prerequisites: ART 3510C or equivalent. Suggested prerequisites: ART 3831C and ART 3803C.

**ART 4703C Sculpture (3).** See ART 3702C.

**ART 4710C Figure Sculpture (3).** To develop skills in representational structure and anatomy from the model and learn mold-making techniques. May be repeated.

**ART 4906C Directed Study (VAR).** A group of students, with the approval of the Visual Arts Department faculty, may select a master artist teacher and pursue a course of art study in selected areas such as graphic design, film, multimedia, environmental design, sound, etc. Arrangements must be made at least one semester before course is offered. May be repeated.

**ART 4910C Research (1-6).** Students may study or research an individual art project with an art faculty member. Complexity and amount of work will determine the number of credit hours granted. May be repeated.

**ART 4949C Cooperative Education in Visual Arts (3).** See ART 3949C.

**ART 4952C Thesis I.** The course will expose students to fundamental issues and ideas current in the field of art. An inquiry into the structure of art and its relationship to society, knowledge, and the self. Prerequisite: 15-18 hours of Studio Major.

**ART 4953C Thesis II (3).** Studio work in student's major area with major professor, resulting in a student exhibit. Arrangements with major professor one semester before graduation. Written thesis required. Prerequisite: 15 semester hours of studio major. (Fall and Spring only). ART 4970C.

**ART 5125C Ceramics (3).** The advanced student will explore all aspects of expression in clay and glaze. Students will be expected to be mostly self-directed. Prerequisite: ART 3111C, or permission of the instructor. May be repeated.

**ART 5133C Fabrics and Fibers (3).** A creative approach to fabrics and fibers, using processes such as dyeing, embroidery, quilting, soft sculpture, batik, on and off loom weaving, etc. May be repeated.

**ART 5159C Jewelry and Metals (3).** A study of basic metal techniques and strengthening of three- dimensional design concepts for the beginner. The advanced student will explore the more difficult technical aspects of areas such as hollow ware, enameling, casting, and stone setting. May be repeated.

**ART 5165C Glassblowing (3).** A basic course in off- hand glass blowing, concerned with preparing, forming, and finishing glass; understanding of glass as an art form; operation and maintenance of a glass studio. May be repeated.

**ART 5340C Drawing (3).** Drawing will be considered as an essential part of every art student's curriculum. Depending on his lower level work, a student will be encouraged to take at least one drawing course at the University. Off-campus studio work may be arranged. May be repeated.

**ART 5341C Figure Drawing (3).** Drawing from the model during assigned studio time. Open to all students. May be repeated. Prerequisite: ART 3310.

**ART 5403C Printmaking (3).** With a knowledge of basic intaglio and relief printing, the student will explore specific media such as etching, lithography, silk-screen and other experimental techniques. May be repeated.

**ART 5580C Painting (3).** An advanced course concentrating on conceptual clarity and the realization of stylistic development. Group, individual criticism will be emphasized. May be repeated. Prerequisites: ART 3510C or equivalent. Suggested prerequisites: ART 3831C and ART 3803C. May be repeated.

**ART 5710C Figure Sculpture (3).** To develop skills in representational structure and anatomy from the model and learn mold-making techniques. May be repeated.

**ART 5730C Sculpture (3).** With a background in beginning sculpture, the student will develop standards of excellence, both in concept and technique, with stress on individual expression. An equipped shop will be available to the student. May be repeated.

**ART 5907C Directed Study (VAR).** A group of students, with the approval of the Visual Arts Department faculty, may select a master artist teacher and pursue a course of art study in selected areas such as graphic design, film, multi-media, environmental design, sound, etc. Arrangements must be made at least one semester before course is offered. May be repeated.

**ART 5910C Research (1-6).** Students may study or research an individual art project with an art faculty member. Complexity and amount of work will determine the number of credit hours granted. May be repeated.

**PGY 3410C Photography (3).** Beginning course in photography and basic darkroom work; introduction to the tradition of still photography. Includes frequent critique of student work. May be repeated.

**PGY 4420C Photography (3).** An advanced course for majors and accomplished non-majors. Includes demanding critique of student's work. May be repeated. Prerequisite: PGY 3410C or permission of instructor.

**PGY 5420C Photography (3).** An advanced course for majors and accom-

plished non-majors. Includes demanding critique of student's work. May be repeated. Prerequisite: PGY 3410C or permission of instructor.

# Certificate Programs

## Certificate in Actuarial Studies

*Coordinating Committee*

**Steven M. Hudson,** *Mathematics*

**James F. Slifker,** *Mathematics*

**Hassan Zahedi,** *Statistics*

The Certificate in Actuarial Studies is designed to provide a focus for those students who are interested in pursuing a career in the actuarial sciences. The primary emphasis of the Certificate program is on the mathematical and statistical background that forms the foundation of the work in this area.

The program is most obviously suitable for those students who are majoring in Mathematics or Statistics. It would also be valuable for those who wish eventually to enter the actuarial field, but choose to major in an allied discipline, such as Business or Computer Science. In addition, it allows access to persons in the community who are currently working in this area and wish to develop or upgrade their skills.

**Prerequisites:**

Before entering the Certificate program, the student must have completed the following courses (or equivalent):

| | |
|---|---|
| MAC 3311-12 | Calculus I-II |
| MAC 3313 | Multivariable Calculus |
| COP 2210 | Programming in PASCAL |
| | or |
| CGS 3420 | Programming for Engineers |

**Recommended Courses:**

It is recommended that a student intending to pursue an actuarial career take courses in Technical Writing (ENC 3210), Economics (ECO 3011 Macro-Economics and/or ECO 3021 Micro-Economics) and have exposure to at least two programming languages).

**Required Courses:**

Upon completion of the following requirements, a student may apply for the Certificate in Actuarial Studies. The Certificate will be awarded at the time of awarding a Bachelor's degree, or upon completion of this work if the student already has a Bachelor's degree.

**Stetistics requirements:** (10)

| | | |
|---|---|---|
| STA 3321 | Mathematical Statistics I | 3 |
| STA 3322 | Mathematical Statistics II | 3 |
| STA 5206 | Design of Experiments | 3 |
| STA 3930 | Special Topics - Statistics | 1 |

**Mathematics requirements:** (7)

| | | |
|---|---|---|
| MAS 3105 | Linear Algebra | 3 |
| MAD 3401 | Numerical Analysis | 3 |
| | or | |
| MAD 5405 | Numerical Methods | |
| MAT 3930 | Special Topics - Mathematics | 1 |

**Two options from the following list:** (6)

a) MAP 5236 Operations Research

b) STA 5236 Regression Analysis

c) One course selected from

| | |
|---|---|
| ACG 3021 | Accounting for Decisions |
| FIN 3403 | Financial Management |

An overall average of B (3.0 GPA) or better in the 23 semester-hours of coursework listed above, with a minimum grade of C or better in each course. A minimum of 12 of these semester-hours must be earned in courses taken at the University.

## American Studies Certificate Program

**Darden A. Pyron,** *Director (History)*

*Coordinating Committee*

**Tucker Arnold,** *(English)*

**Lynn Berk,** *(English)*

**Eric Leed,** *(History)*

**Howard Rock,** *(History)*

**Donald Watson,** *(English)*

The American Studies Certificate Program provides the opportunity for students to examine the nature of American civilization through an interdisciplinary study of American history, literature, culture, and thought. The program provides a grounding in American literature and American history, a sampling of how each discipline approaches the study of American civilization, and an opportunity to follow the approaches of political science, anthropology, philosophy, and religion. Through a seminar in American studies, students will apply the insights of the various disciplines to problems of their own choosing.

The Certificate in American Studies is awarded with a bachelor's degree, or upon completion of Certificate requirements, to a student who already possesses that degree.

**General Requirements**

A total of seven courses chosen among the prescribed certification courses with a grade of 'C' or higher.

**Specific Requirements**

| | | |
|---|---|---|
| AML 2011 | Survey of American Literature I | 3 |
| AML 3022 | Survey of American Literature II | 3 |

**Two consecutive semesters chosen from the following:**

| | | |
|---|---|---|
| AMH 3012 | American History 1600-17633 | |
| AMH 3100 | American History, 1607-1850 | 3 |
| AMH 3200 | American History, 1850 to the Present | 3 |

**Two electives chosen from the following:**

| | | |
|---|---|---|
| ANT 3409 | Anthropology of Contemporary Society | 3 |
| PHH 3700 | American Philosophy | 3 |
| POT 3204 | American Political Thought | 3 |
| REL 3100 | Religion and Culture | 3 |

An appropriate American Literature course.

An appropriate American History course.

## Consumer Affairs Certificate Program

**Juan Sanchez,** *Director (Psychology)*

*Advisory Committee*

**Yao Apasu** *(Marketing and Environment)*

**Paul W. Foos** *(Psychology)*

**Greta Howard** *(Apparel Studies)*

**Shearon Lowery** *(Sociology/Anthropology)*

**Samuel Shapiro** *(Statistics)*

The Certificate Program in Consumer Affairs provides a sound educational base for those dealing with consumer affairs, be they buyers, sellers, or users of products and services.

Courses leading to the Certificate can serve those pursuing careers in consumer affairs, as well as provide personal benefit to individuals in their role as consumers.

The number of issues and conflicts involving consumers, business, government, and labor demand study and research so that more appropriate resolutions can be achieved.

The Certificate Program is intended to provide business, government, education, industry, and labor with a resource for educating selected personnel in a broad range of subject matter related to consumer affairs.

For more information on the program, please contact the Director in DM 407B 348-3387. Required Courses

The Certificate will be awarded upon satisfactory completion of six courses from among those listed below. Students are admitted to the program provided proper application has been made to the Director.

**Group I:** (Choose three courses)

| | | |
|---|---|---|
| COA 2410 | Consumer Decisions | 3 |
| ECO 3021 | Economics, Man and Society - Micro | 3 |
| EVR 3011 | Environmental Resources and Pollution | 3 |
| MAR 4503 | Consumer Behavior | 3 |
| SOP 4645 | Consumer Psychology | 3 |
| SYP 4421 | Man, Society, and Technology | 3 |

**Group II:** (Choose three courses)

| | | |
|---|---|---|
| COA 4460 | Consumer and Technology | 3 |
| COA 5450 | Consumer Legislation | 3 |
| EVR 3010 | Energy Flow in Natural and Man-made Systems | 3 |
| FOS 3004 | Food and the Consumer | 3 |
| MAN 3503 | Managerial Decision Making | 3 |
| MAN 4151 | Behavioral Science in Management | 3 |
| SOP 4649 | Experimental Consumer Psychology | 2 |
| SOP 4649L | Experimental Consumer Psychology Lab | 3 |
| SYP 4321 | Mass Culture | 3 |

*Note:* Students may substitute an independent research project working with any professor provided the professor approves the request and final approval is obtained in writing from the Program Director.

## Environmental Studies Certificate Program

**J. Parker,** *Director (Chemistry) Coordinating Committee*
**J. Gottlieb,** *(Political Science)*
**J. Huchingson,** *(Philosophy and Religious Studies)*
**S. Koptur,** *(Biology)*

The Certificate Program in Environmental Studies is designed to provide students in various majors with the unique perspective of interdisciplinary ecological education to both enrich and expand the breadth of their primary training. The Certificate seeks to provide participants with an analytic basis for understanding the milieu of local and global environmental problems and processes.

The program requires no prerequisite and is complementary to majors in all disciplines and schools at the University. This certificate is appropriate also for persons who already have a degree but would like to increase their knowledge of contemporary environmental issues.

**General Requirements:** Six courses as follows:

| | | |
|---|---|---|
| **1.** EVR 3010 | Energy Flow in Natural and Man-Made Systems | 3 |
| EVR 3011 | Environmental Resources and Pollution | 3 |
| EVR 3013C | Ecology of South Florida | 4 |
| | or | |
| EVR 4211 | Water Resources | 3 |
| EVR 4311 | Energy Resources | 3 |
| EVR 4231 | Air Resources | 3 |
| **2.** PUP 4203 | Environmental Politics and Policies | 3 |

**3.** Two courses from the following, at least one of which must be from the Social Sciences or Humanities:

| | |
|---|---|
| ANT 3403 | Cultural Ecology |
| ANT 4552 | Primate Behavior and Ecology |
| BOT 2010C | Plant Biology |
| ECP 3302 | Introduction to Environmental Economics |
| ECP 4314 | Land and Resource Economics |
| ENT 3004 | General Entomology |
| EVR 3013C | Ecology of South Florida |
| EVR 4211 | Water Resources |
| EVR 4231 | Air Resources |
| EVR 4311 | Energy Resources |
| EVR 4905 | Independent Study |
| EVR 4920 | Environmental Colloquium |
| EVR 5907 | Research and Independent Study |
| EVR 5935 | Special Topics |
| EVR 5936 | Topics in Environmental Studies |
| GEO 3510 | Earth Resources |
| GLY 3850 | Environmental Geology |
| INR 3043 | Population and Society |
| INR 4054 | World Resources, World Order |
| MCB 4603 | Microbial Ecology |
| PCB 3043 | Ecology |
| REL 3492 | Man and Nature |
| SOP 4712 | Environmental Psychology |
| URP 4149 | Planning and Human Ecology |
| ZOO 3892C | Biology of Captive Wildlife |
| ZOO 4423 | Herpetology |

Total Credit Hours: 18-19

## Ethnic Studies Certificate Program

**John F. Stack, Jr.,** *Director (Political Science)*

Coordinating Committee

**Ralph S. Clem,** *(International Relations)*
**Anthony P. Maingot,** *(Sociology/Anthropology)*
**Mark D. Szuchman,** *(History)*

The College of Arts and Sciences offers the student a program in ethnic studies, in recognition of the place ethnic studies enjoys in the social sciences and humanities, and the importance of ethnic studies in today's world. The Program seeks to establish a proper balance between its academic goals and objectives and the on-going concerns of the University's local and international constituencies. The Program contains four specialized areas: Black Studies, Jewish Studies, Cuban Studies, and Comparative Studies.

The Certificate in Ethnic Studies is awarded with a bachelor's degree or upon completion of Certificate requirements, to a student who already possesses that degree. The Certificate will specify the area of concentration chosen by the student.

A student may acquire the Certificate in Ethnic Studies by fulfilling the following requirements:

General Requirements: A minimum of six courses with a grade 'C' or higher.

Courses in both the 'Core' and 'Specialized' areas (indicated below) must be taken from at least two different departments.

A maximum of one course in a relevant language will be accepted.

A maximum of two courses of independent study will be accepted.

The Program Director must approve the student's overall plan and all special topics courses must be approved by Certificate advisors in each area.

The Program is especially eager to encourage programs of study abroad and field work in general. Credit for such programs will be awarded on an individual basis after evaluation by the Director and the Coordinating Committee, but in no case will it consist of more than three courses towards the Certificate.

### Specific Requirements

A core of a minimum of two to three courses in a theoretical and conceptual nature in the area of ethnic studies

A minimum of three to four specialized courses in one of the four distinct areas: Black Studies, Jewish Studies, Cuban Studies, Comparative Studies.

**Core Courses**

SYD 4700 or ANT 4451: Minorities; PUP 4314: Ethnic Politics; INR 4084: Ethnicity in World Politics; INR 4024: Ethnicity and Nationality; ECP 3144: Economics of Race and Sex Discrimination; SOP 4444: Attitudes and Ethnicity.

**Specialized Courses**

(*Note*: This is not an exhaustive list; students should consult with the Director of the program on current offerings.)

**Specialized Courses in Cuban Studies**

| | | |
|---|---|---|
| ECS 4430 | The Economic Development of Cuba | 3 |
| FOW 4390 | Genre Studies (with reference to Cuban Literature) | 3 |
| INR 3246 | International Relations of the Caribbean | 3 |
| LAH 3930 | Cuban History | 3 |
| SYD 4630 | Latin American and Caribbean Social Structures | 3 |
| SYA 4124 | Social Theory and Third World Innovations | 3 |

**Specialized Courses in Black Studies**

| | | |
|---|---|---|
| AML 5212 | Major American Literary Figures | 3 |
| ANT 4315 | Afro-American Anthropology | 3 |
| ANT 4352 | Area Studies | 3 |
| LIT 4203 | Regional Literature in English | 3 |
| LIT 4930 | Special Topics | 3 |
| MUH 3116 | Evolution of Jazz | 3 |
| SYD 4701 | Social Conflict in Multi-Ethnic Societies | 3 |

**Specialized Courses in Jewish Studies**

| | | |
|---|---|---|
| GEA 3630 | Population and Geography of the Middle East | 3 |
| INR 3274 | International Relations of the Middle East | 3 |
| POS 4147 | Political Urban Jewish Leadership | 3 |
| REL 3224 | The Prophets | 3 |

## Gerontological Studies Certificate Program

**Joan Erber,** *Director (Psychology)*

Coordinating Committee

**Reba L. Anderson,** *(Occupational Therapy)*

**Leon A. Cuervo,** *(Biological Sciences)*

**Charles A. Frankenhoff,** *(Health Services Administration)*

**Shearon A. Lowery,** *(Sociology/Anthropology)*

**Martha Pelaez,** *(Southeast Florida Center on Aging)*

**Florence Safford,** *(Social Work)*

The Certificate Program in Gerontological Studies is an undergraduate, academic certificate program designed to complement the student's major area of study.

The goals of the program are: (1) to stimulate interest in the study of aging; (2) to provide an introduction to the field of gerontology from a multidisciplinary perspective; (3) to provide foundation courses for advanced study in gerontology; and (4) to provide students seeking employment upon graduation with a sound background which will make them attractive to employers.

The State of Florida has the largest percentage of persons over 65. Demographic projections indicate that not only will Florida continue to increase its percentage of older persons, but so will the nation as a whole. Thus, it has become imperative that gerontological knowledge be increased and shared. This is critical, both for individuals to function as informed citizens and for enhanced gerontological teaching, research, and service.

The present certificate program seeks to meet these needs by providing a multidisciplinary approach to the study of aging. The Certificate in Gerontological Studies is awarded with a bachelor's degree, or on completion of Certificate requirements to a student who already possesses that degree. Interested students should meet with the director early to plan an individualized program to meet the student's educational or occupational goals.

**Certificate Requirements:** (16-17)

1. A minimum of six courses must be completed with a grade of 'C' or higher in each course.

2. Courses must be taken from at least three different disciplines.

3. Electives must be taken from three different categories listed below.

4. Up to two gerontologically relevant courses taken elsewhere may be accepted by the director.

5. Students should contact the director during registration for a list of certificate courses offered each semester.

**Required Courses:** (8)

| | | |
|---|---|---|
| DEP 4464 | Psychology of Aging | 3 |
| SYP 4730 | Sociology of Aging | 3 |
| PCB 3241 | Physiology of Aging | 3 |

**Elective Courses** (8-9)

**Aging in the Context of the Life-Span**

| | | |
|---|---|---|
| DEP 3000 | Human Growth and Development | 3 |
| FAD 2230 | Family Life Cycle | 3 |

**Crime**

| | | |
|---|---|---|
| CCJ 3033 | Crime and the Elderly | 3 |

**Death and Dying**

| | | |
|---|---|---|
| SYP 4740 | Sociology of Death | 3 |
| PHM 4050 | Philosophy of Death | 3 |

**Health and Rehabilitation**

| | | |
|---|---|---|
| OTH 3160 | Adaptive Living Skills | 2 |
| OTH 3160L | Adaptive Living Skills Lab | 1 |
| PHT 3400 | Emotional Aspects of Physical Disability | 2 |
| SOP 4834 | Psychology of Health and Illness | 3 |

**Nutrition**

| | | |
|---|---|---|
| HUN 2201 | Principles of Nutrition | 3 |
| HUN 4403 | Life Cycle Nutrition | 3 |

**Program Administration**

| | | |
|---|---|---|
| HSA 4113 | Issues and Trends in Health Care Delivery | 3 |

**Supervised Research/Practicum in Gerontology:** (3)

Students wishing to undertake an independent research project or an independent practicum in gerontology should: First obtain the collaboration of a faculty sponsor, and, second, obtain the approval of the certificate director prior to beginning the project by submitting a one page proposal. Credit for the project will be obtained under the appropriate 'independent studies' course in the faculty advisor's department.

## International Studies Certificate Program

**Charles G. MacDonald,** *Director (International Relations)*

*Advisory Council*

**Robert Farrell,** *(Education)*

**Clair McElfresh,** *(Music)*

**Laurence Miller,** *(Library)*

**Luis Salas,** *(Criminal Justice)*

**Mark Rosenberg,** *(Political Science)*

**Wunnava Subbarao,** *(Electrical Engineering)*

International Studies constitutes an important focus for the University. The International Studies Program promotes an interdisciplinary approach to the study of transnational phenomena and awards a Certificate to degree and nondegree students who complete successfully its requirements (stated below).

Students pursuing a bachelor's degree may take the Certificate Program to complement their major disciplinary area of study. Those not seeking a degree may take the Certificate Program to obtain a broad and systematic introduction to International Studies. Students interested in this Program should consult with the Director of International Studies.

**Program:** (Minimum of 18 credits)

At least one of the following courses in International Politics/Relations:

| | |
|---|---|
| INR 2001 | Introduction to International Relations |
| INR 3002 | Dynamics of World Politics |
| INR 3003 | Foundations of International Relations |

At least one of the following courses in International Economics/Business:

| | |
|---|---|
| MAN 3602 | International Business |
| ECO 4701 | World Economy |
| ECO 4703 | International Economics |

Three semester hours of independent study under faculty supervision during which a research paper will be written. The independent study and the resulting paper must be approved by the program Director. This paper will be discussed in a joint faculty-student seminar.

A minimum of nine semester hours of coursework from courses identified by the program. A list of such courses will be circulated to all students in the program at the start of each semester.

Basic competency (two-semester college level) in a language other than English. Language courses where necessary, will not be included as courses within the 18-semester hour coursework requirement.

A minimum grade of 'C' in each course taken in the program. Courses must be taken in at least three different departments.

Prerequisites that may be required for courses in the program will not be included as courses within the 12-semester hour coursework requirement.

## Labor Studies Certificate Program

The Certificate in Labor Studies is an 18 credit course of study designed to offer degree-seeking students from a wide range of backgrounds an understanding of the major issues in the field. Courses must be taken from at least two discipline other than Labor Studies. The Certificate is also appropriate for students who already have a degree and would like to acquire additional knowledge about various facets of the field of Labor Studies. Labor Studies as a discipline acknowledges insights which have emerged from decades of university-union cooperation in labor education and fulfills an academic need to study labor affairs apart from the traditional framework of industrial relations. According to this concept, Labor Studies is the academic examination of issues which confront people in the pursuit of their need for rewarding employment. The focus of inquiry is on workers as individuals, as members and/or leaders in their unions or associations, and as citizens of their communities

Courses must be taken from at least two disciplines in addition to Labor Studies. Minimum of 18 credit hours for certificate.

**Required Courses:**(12 )

| | |
|---|---|
| LBS 4001 | Introduction to Labor Studies |

Minimum of three courses (9 hours) to be chosen from the following: (additional courses from this list may be used to fulfill electives)

| | |
|---|---|
| LBS 4101 | Theories of the Labor Movement |
| LBS 4210 | Women and the Labor Movement |
| LBS 4501 | Labor and Industrial Relations Law |
| LBS 4900 | Directed Study in Labor Studies |
| SYO 4360 | Industrial Sociology |

**Electives** (6 hours)

| | |
|---|---|
| AMH 3270 | Contemporary U.S. History |
| AMH 4500 | U.S. Labor History |
| ECO 3011 | Economics, Man & Society, Macro |
| ECO 3101 | Theory of Price |
| ECO 3021 | Economics, Man & Society, Micro |
| ECO 4622 | Economic Development of U.S. |
| ECO 4701 | World Economy |
| ECP 3123 | Economics of Poverty |
| ECP 4203 | Introduction to Labor Economics |
| ECP 4204 | Theory of Labor Economics |
| INP 3002 | Introductory Industrial/Organizational Psychology |
| INR 3003 | Foundations of International Relations |
| LBS 3401 | Collective Bargaining in Industrial Systems |
| LBS 4060 | Administration of Labor Organizations |
| LBS 4150 | Contemporary Labor Issues |
| LBS 4461 | Labor Dispute Resolution |
| LBS 4654 | Comparative and International Labor Studies |
| POS 3044 | Government and Politics of the U.S. |
| POT 3204 | American Political Thought |
| PUP 4004 | Public Policy: U.S. |

## Professional Certificate in Labor Studies and Labor Relations

The Professional Certificate in Labor Studies and Labor Relations is an eighteen credit course of study designed to offer both pre and post-baccalaureate as well as degree-seeking students the opportunity to obtain specialized knowledge in the areas of labor studies, collective bargaining and labor-management relations. This certificate is designed to provide students with broad-based knowledge about the field of labor studies with its focus upon the examination of the issues which confront people in the pursuit of their need for rewarding employment as well as insights from the field of labor relations with its emphasis upon the formal interactions between labor and management. Students who are interested in the practical as well as the more theoretical issues of labor studies and labor relations will be especially interested in this certificate.

Courses should be taken from at least one discipline in addition to Labor Studies. Minimum of eighteen credit hours for certificate. Courses are to be selected in consultation with and agreement of advisor. A grade of "C" or better is required for all courses. (C- is not acceptable).

**Required Courses :** (9 )

All students are required to take LBS 4001, Introduction to Labor Studies, and a minimum of two courses to be selected from among the following: (additional courses may be used to fulfill electives).

| | |
|---|---|
| LBS 3401 | Collective Bargaining in Industrial Systems |
| | or |
| MAN 4401 | Collective Bargaining |
| LBS 4461 | Labor Dispute Resolution |
| | or |
| MAN 4410 | Union-Management Relations |
| LBS 4150 | Contemporary Labor Issues |
| LBS 4260 | Administration of Labor Organizations |

| | |
|---|---|
| LBS 4654 | Comparative and International Labor Studies |
| PAD 5427 | Collective Bargaining in the Public Sector |

**Electives (9 hours):**

To be chosen from the following in consultation with and approval of advisor. (Some courses may require prerequisites).

| | |
|---|---|
| AMH 3270 | Contemporary U.S. History |
| AMH 4500 | U.S. History |
| ECO 3011 | Economics, Man & Society, Macro |
| ECO 3021 | Economics, Man & Society, Micro |
| ECP 4203 | Introduction to Labor Economics |
| EIN 3214 | Safety in Engineering |
| EIN 4261 | Industrial Hygiene |
| INP 3002 | Introductory Industrial/Organizational Psychology |
| LBS 4101 | Theories of the Labor Movement |
| LBS 4210 | Women and the Labor Movement |
| LBS 4501 | Labor and Industrial Relations Law |
| LBS 4900 | Directed Study in Labor Studies |
| LBS 5464 | Fact Finding and Arbitration |
| MAN 4610 | International and Comparative Industrial Relations |
| PAD 3034 | Public Policy and Its Administration |
| PAD 4024 | Concepts and Issues in Public Administration |
| PAD 4223 | Public Sector Bargaining |
| POS 2042 | Government and Politics of the U.S. |
| POS 3424 | Legislative Process |
| POS 4122 | State Government and Politics |
| PUP 4004 | Public Policy (U.S.) |
| STA 3013 | Statistics for Social Services |
| SPC 2600 | Public Speaking |
| SYA 3300 | Research Methods |
| SYO 4360 | Industrial Sociology |

## Latin American and Caribbean Studies Certificate Program

**Mark B. Rosenberg,** *Director and Professor(Political Science)*
**A.Douglas Kincaid,** *Associate Director and Assistant Professor(Sociology)*
**Barbara C. Cruz,** *Student Advisor*

The program in Latin American and Caribbean studies at Florida International University represents one way in which the fulfills its commitment to furthering international understanding. The program encourages students to take an interdisciplinary approach to this important area by awarding a certificate to both degree and non-degree seeking students who successfully complete the requirements. For students pursuing a degree, the certificate program should be understood as a complement to the student's major area or discipline of study. For non-degree seeking students, the certificate represents a way to gain a fuller, more complete understanding of Latin America and the Caribbean without pursuing a lengthy course of study at the university.

Students registered in the certificate program receive regular mailings announcing course offerings, seminars, foreign study opportunities, and other special events. They also receive LACC News, a newsletter reporting on people and activities concerning Latin American and Caribbean affairs at the university.

LACC has sponsored summer study abroad opportunities since 1981 in Mexico, Costa Rica, Puerto Rico, Barbados, Haiti, and the Dominican Republic. In addition, LACC has placed certificate students in summer programs sponsored by the Organization of American States in Argentina and Costa Rica.

An important component of Latin American and Caribbean holdings of the FIU library system had surpassed 29,000 volumes, exclusive of government documents. Regionally, the collection is strongest in works on Cuba and Central America, with substantial strength in Caribbean countries as well. The library's Latin American and Caribbean Collection receives about 45 publications and eight daily or weekly newspapers (this is in addition to 120 Latin American and Caribbean-related publications that can be found in the library's general periodical section). LACC also currently receives about 150 publications, primarily newsletters and research report series. In addition, the audio-visual section of the library contains about 220 films and video recordings on Latin America and the Caribbean and an extensive slide collection of Latin American art works.

**Certificate Requirements:**

1. At least 15 semester hours of courses from the certificate program course listing, or approved by the certificate program faculty advisor. Courses must be taken in at least three different disciplines, and from at least two disciplines outside of the student's departmental major.

2. The two-course, introductory language sequence at FIU in Spanish, Portuguese, or French. Exemption from this requirement may be obtained through a proficiency examination administered by the FIU Department of Modern Languages. Language courses may not be counted toward the fulfillment of requirement (1) above.

3. A minimum of three semester hours of independent study under the supervision of a certificate program faculty member, or other instructor approved by the certificate program faculty advisor. During this work, the student will prepare a research paper on a theme directly concerned with some aspect of Latin American and Caribbean affairs.

Students interested in the certificate program, should consult directly with either the Associate Director or Student Advisor of the Latin American and Caribbean Center. Call (305) 348-2894 for an appointment.

The following courses fulfill certificate requirements. These courses should be understood as a partial list; students should consult with advisors of the certificate program about current course offerings.

**Anthropology**

| | | |
|---|---|---|
| ANT 3144 | Prehistory of the Americas | 3 |
| ANT 3251 | Peasant Society | 3 |
| ANT 3403 | Cultural Ecology | 3 |
| ANT 4224 | Tribal Art | 3 |
| ANT 4324 | Mexico | 3 |
| ANT 4328 | Maya Civilization | 3 |
| ANT 4332 | Latin America | 3 |
| ANT 4334 | Comparative Latin American Cultures | 3 |
| ANT 4340 | Cultures of the Caribbean | 3 |
| ANT 4343 | Cuban Culture & Revolution | 3 |

**Economics**

| | | |
|---|---|---|
| ECO 4701 | The World Economy | 3 |
| ECO 4733 | Multinational Corporation | 3 |
| ECO 5709 | The World Economy | 3 |
| ECS 3402 | The Political Economy of South America | 3 |
| ECS 3440 | Economics of Central America | 3 |
| ECS 4013 | Economic Development | 3 |
| ECS 4403 | The Latin American Economies | 3 |
| ECS 4404 | Economic Integration-Latin America | 3 |
| ECS 4430 | The Economic Development of Cuba - Past and Present | 3 |

| | | |
|---|---|---|
| ECS 4432 | Economic Integration - Caribbean | 3 |
| ECS 4433 | Economics of the Caribbean | 3 |

**Education**

| | | |
|---|---|---|
| EDF 5720 | Latin American Education: A Historical and Contemporary Overview | 3 |
| EDF 5780 | Intercultural Education: National and International Perspectives | 3 |
| EDG 6425 | Macro-Micro Planning in Education | 3 |

**Geology**

| | | |
|---|---|---|
| GLY 3157 | Elements of Caribbean Geology | 3 |
| GLY 4190 | Caribbean Earth Sciences Seminar | 3 |
| GLY 4792 | Caribbean Mineral Resources Field Trip | 3 |
| GLY 5620 | Caribbean Stratigraphic Micropaleontology | 3 |
| GLY 5793 | Caribbean Shallow-Marine Environments | 3 |

**History**

| | | |
|---|---|---|
| LAH 2092 | The Latin Americans | 3 |
| LAH 3132 | The Formation of Latin America | 3 |
| LAH 3450 | Central America | 3 |
| LAH 4433 | Modern Mexico | 3 |
| LAH 4474 | Topics in Caribbean History | 3 |
| LAH 4482 | Cuba from Bourbons to Castro | 3 |
| LAH 4511 | Order and Revolution in Argentina | 3 |
| LAH 4932 | Topics in Latin American History | 3 |
| HIS 4450 | Slavery in the Americas | 3 |

**International Business**

| | | |
|---|---|---|
| MAN 3602 | International Business | 3 |
| MAN 4600 | International Management | 3 |
| MAN 4610 | International and Comparative Industrial Relations | 3 |
| MAN 6635 | International Business Policy | 3 |

**International Relations**

| | | |
|---|---|---|
| GEA 3320 | Population and Geography of the Caribbean | 3 |
| GEA 3400 | Population and Geography of Latin America | 3 |
| INR 3245 | International Relations of Latin America | 3 |
| INR 3246 | International Relations of the Caribbean | 3 |
| INR 4247 | Caribbean Regional Relations | 3 |
| INR 4283 | International Relations, Development, and the Third World | 3 |

**Marketing**

| | | |
|---|---|---|
| MAR 4156 | International Marketing | 3 |
| MAR 4803 | Cases in Marketing Management | 3 |
| MKA 4244 | Export Marketing | 3 |

**Modern Languages**

| | | |
|---|---|---|
| FRE 3500 | Civilization I (Latin American course) | 3 |
| FRE 4501 | Civilization II (Latin American course) | 3 |
| FRW 3520 | Prose and Society (Latin American course) | 3 |
| POR 3500 | Luso-Brazilian Culture | 3 |
| SPN 3500 | Civilization I (Latin American course) | 3 |
| SPN 4501 | Civilization II (Latin American course) | 3 |
| SPW 3371 | The Latin American Short Story | 3 |
| SPW 3520 | Prose and Society (Latin American course) | 3 |
| SPW 4304 | Latin American Theatre | 3 |
| SPW 4351 | Spanish American Poetry I | 3 |
| SPW 4352 | Spanish American Poetry II | 3 |
| SPW 4364 | The Spanish American Essay | 3 |
| SPW 5237 | The Traditional Spanish American Novel | 3 |
| SPW 5286 | Contemporary Spanish American Novel | 3 |
| SPW 5358 | Prose and Poetry of Jorge Luis Borges | 3 |
| SPW 5359 | Poetry of Pablo Neruda | 3 |
| SPW 5576 | Spanish American Modernism | 3 |

**Philosophy and Religion**

| | | |
|---|---|---|
| PHH 3042 | Latin American Philosophies | 3 |
| REL 4481 | Contemporary Latin American Religious Thought | 3 |

**Political Science**

| | | |
|---|---|---|
| CPO 3055 | Authoritarian Politics | 3 |
| CPO 3303 | Government and Politics of South America | 3 |
| CPO 3304 | Theories of Latin American Politics | 3 |
| CPO 3323 | Government and Politics of the Caribbean | 3 |
| CPO 4005 | Topics in Comparative Politics | 3 |
| CPO 4034 | Politics of Development & Underdevelopment | 3 |
| CPO 4327 | Topics in Caribbean Politics | 3 |
| CPO 4333 | Central American Politics | 3 |
| CPO 4360 | Cuban Politics | 3 |
| CPO 5035 | Politics of Development | 3 |
| INR 4244 | Latin America in International Politics | 3 |

**Psychology**

| | | |
|---|---|---|
| SOP 4004 | Social Psychology in Latin America | 3 |

**Sociology**

| | | |
|---|---|---|
| SYD 4360 | Latin American and Caribbean Social Structures | 3 |
| SYD 4610 | Area Studies (Latin American and/or Caribbean) | 3 |
| SYD 4124 | Social Theory and Third World Innovations | 3 |
| SYD 4701 | Social Conflict in Multi-Ethnic Societies | 3 |

**Visual Arts**

| | | |
|---|---|---|
| ARH 4652 | Andean Pre-Columbian Art | 3 |
| ARH 4670 | 20th Century Latin American Art | 3 |

## Legal Translation and Court Interpreting Certificate Program

This certificate provides practical and theoretical experience to prepare the student for employment at entry level in the legal translation and interpretation fields. This curriculum does not train specifically for work as conference interpreter, but provides a good background and the experience needed for further study in both legal translation and court interpreting. Through its academic track, it offers complementary studies for the practitioner who wants to strengthen his or her competence in the field. The program consists of 30 semester credit hours.

**Prerequisites**

| | | |
|---|---|---|
| ENC 3034 | Problems in English Composition | 3 |
| SPN 3302 | Review grammar and Writing II | 3 |

No credits allowed. These prerequisites may be fulfilled by passing a qualifying examination.

**Core Courses:** (12)

| | | |
|---|---|---|
| SPT 3800 | Introduction to Translation Skills | 3 |
| SPT 3812 | Introduction to Oral Translation | 3 |
| SPT 4801 | Translation Practica | 3 |

| | | |
|---|---|---|
| SPT 4802 | Practica in Oral Translation and Terminology | 3 |

**Required Program Courses:** (12)

| | | |
|---|---|---|
| SPT 4803 | Practica in Legal Translation | 3 |
| SPT 4804 | Practica in Legal Interpretation | 3 |
| SPT 4940 | Judicial Translation/Interpretation Internship | 3 |
| SPT 4813 | The Interpreter and Language | 3 |

**Electives:** (6)

| | | |
|---|---|---|
| BUL 4100 | Legal Environment of Business | 3 |
| BUL 4111 | Business Law I | 3 |
| CCJ 3011 | The Nature and Causes of Crime | 3 |
| CCJ 3020 | An Overview of Criminal Justice | 3 |
| CCJ 3101 | Law Enforcement System | 3 |
| CCJ 3290 | Judicial Policy Making | 3 |
| CCJ 4280 | Law and Criminal Justice | 3 |
| CCJ 4331 | Probation, Parole and Community Program | 3 |
| CCJ 4662 | Criminal Justice and the Minority Community | 3 |
| INR 3403 | International Law | 3 |
| ORI 3800 | Basic Oral Interpretation | 3 |
| POS 3283 | The Judicial Process | 3 |
| POS 3603 | Constitutional Law: Powers | 3 |
| POS 3604 | Constitutional Law: Limitations | 3 |
| POS 4284 | Judicial Behavior | 3 |
| POS 4493 | Politics of Judicial Administration | 3 |
| RMI 4015 | Principles of Insurance | 3 |
| SPC 2600 | Public Speaking | 3 |
| SPN 3415 | Communication Arts | 3 |
| SYP 3520 | Criminology | 3 |

In addition to these subjects, the electives may be chosen from offerings in the departments of Sociology/Anthropology, Computer Science, Economics, International Relations, Modern Languages, and Political Science by securing the approval of the Director of the Translation and Interpretation Program.

## Linguistics Studies Certificate Program

**Lynn Berk,** Director (English)

*Coordinating Committee*

**Isabel Castellanos,** *(Modern Language)*
**Virginia Gathercole,** *(English)*
**Tometro Hopkins,** *(English)*
**John Jensen,** *(Modern Languages)*
**Reinaldo Sanchez,** *(Modern Languages)*
**George Kovacs,** *(Philosophy)*
**Peter Machonis,** *(Modern Languages)*
**Paul Foos,** *(Psychology)*
**Kemp Williams,** *(English)*
**Mahmet Yavas,** *(English)*

In addition to an M.A. in Linguistics, the University offers a Certificate acknowledging that a student has demonstrated competence in course work pertaining to the study of linguistics. This Certificate is designed to meet the needs of those who have a general interest in linguistics studies, as well as those for whom work in linguistics would assist in career planning or advancement. Both undergraduate and graduate students are eligible to earn the certificate.

A student can acquire a Certificate in Linguistic Studies by fulfilling the following requirements:

The successful completion of at least six courses in linguistics or linguistics-related courses. These courses are listed below.

Courses must be selected from at least two different departments. Students should consult a Certificate advisor in selecting courses.

With the advice of the Coordinating Committee, the student is encouraged to attain some degree of proficiency in a language other than his or her native language.

In addition to the requirements noted above, all of the requirements for obtaining a bachelor's degree from the University must be met, or the student must possess a bachelor's degree from another institution.

A Coordinating Committee representing various fields, will advise students and grant the Certificate.

A student wishing to earn a Linguistics Studies Certificate will choose courses from the following list of offerings:

**Required Courses**

| | | |
|---|---|---|
| LIN 3010 | Introduction to General Linguistics | 3 |
| | or | |
| LIN 3013 | Introduction to General Linguistics | |
| | or | |
| LIN 5018 | Introduction to Linguistics | |
| LIN 4680 | Modern English Grammar | 3 |
| | or | |
| FRE 4800 | Contrastive Morphology | |
| | or | |
| SPN 4800 | Contrastive Morphology | |
| | or | |
| SPN 4802 | Contrastive Syntax | |
| | or | |
| LIN 5501 | English Syntax | |

**Four of the following courses:** (12)

| | |
|---|---|
| LIN 4612 | Black English |
| LIN 4702 | Applied Linguistics (English) |
| LIN 4680 | Modern English Grammar |
| LIN 4122 or LIN 5146 | Historical and Comparative Linguistics |
| LIN 6510 | Introduction to Generative Syntax |
| LIN 5206 | Phonetics |
| LIN 4321 or LIN 6323 | General Phonology |
| LIN 4430 or LIN 5431 | General Morphology and Syntax |
| LIN 5107 | History of English Language |
| LIN 5748 | Applied Linguistics: Theory and Applications |
| LIN 4801 or LIN 6805 | Semantics |
| LIN 4651 | Women and Language |
| LIN 5017 | Cognitive Linguistics |
| LIN 5108 | Language Universals |
| LIN 5720 | Second Language Acquisition |
| LIN 5732 | Speech Errors and Linguistic Knowledge |
| LIN 6602 | Language Contact |
| FOL 3732 or LIN 5735 | Romance Linguistics |
| FRE 3780 | French Phonetics |
| FRE 3820 | Dialectology (in French) |
| FRE 4840 | History of the French Language |
| FRE 4791 | Contrastive Phonology (French/English) |
| FRE 4800 | Contrastive Morphology (French/English) |
| FRE 5735 | Special Topics in French Linguistics |
| LIN 4702 | Applied Linguistics (Modern Languages) |
| LIN 4722 | Problems in Language Learning |
| LIN 5601 | Introduction to Sociolinguistics |
| LIN 4620 or LIN 5625 | Studies in Bilingualism |
| LIN 5760 | Research Methods in Linguistics |
| LIN 5934 | Special Topics in Linguistics |
| POR 3930 | Special Topics in Portuguese Language/Linguistics |
| SPN 3780 | Spanish Phonetics |
| SPN 3820 | Dialectology (in Spanish) |
| SPN 4840 | History of the Spanish Language |
| SPN 4562 or LIN 5565 | Studies in Bilingualism (Spanish/English) |
| SPN 4790 | Contrastive Phonology (Spanish/English) |
| SPN 4800 | Contrastive Morphology (Spanish/English) |
| SPN 4802 | Contrastive Syntax |

| | |
|---|---|
| SPN 4822 | Hispanic-American Sociolinguistics |
| SPN 4824 | Dialectology of the Spanish Caribbean |
| SPN 4930 or SPN 6930 | Special Topics in Spanish Linguistics |
| LIN 4701 | Psychology of Language |
| LIN 4710 or LIN 5715 | Language Acquisition |
| PHI 4221 | Philosophy of Language |
| PHI 4222 | Philosophy of Dialogue |
| MHF 4302 | Mathematical Logic |

## Student Media Advising Certificate Program

This professional certificate program is designed primarily for journalism teachers and for student media advisors on all levels and for those aspiring to the profession. This program will satisfy the requirements of the certification, re-certification or incentive, credits for current public school teachers in the field.

The Certificate in Student Media Advising requires 15 credits to be taken as follows:

**Required Courses:**

| | |
|---|---|
| JOU 5806 | Student Publications Supervision |
| MMC 5207 | Ethical and Legal Foundations of the Student Press |
| VIC 5205 | Trends in Graphics and Design |

**Elective Courses**

Students must take two of the following:

| | |
|---|---|
| RTV 5936 | Seminar in New Communication Technologies |
| MMC 6402 | Theories of Mass Communication |
| MMC 6635 | Contemporary Issues in Mass Communication |
| JOU 6196 | Advanced Writing Techniques |
| PUR 4101 | Publications Editing and Design |
| JOU 4208 | Magazine Editing and Production |

or

other courses upon approval of faculty advisor.

## Translation Studies Certificate Program

This professional certificate is designed to train students in the techniques and skills needed for the translation (E-S and S-E) of routine documents and general correspondence. It also provides the general background and introductory professional courses needed for future study or work in the field. The program consists of 30 semester hours.

Through its academic track, the certificate program offers complementary studies for the practitioner who wants to strengthen his or her competence in these fields.

**Prerequisites**

| | | |
|---|---|---|
| SPN 3302 | Review Grammar and Writing II | 3 |
| ENC 3200 | Business Letter and Reports | 3 |

No credits allowed. These prerequisites may be fulfilled by passing a qualifying examination.

**Core Courses:** (12)

| | | |
|---|---|---|
| SPT 3800 | Introduction to Translation Skills | 3 |
| SPT 3812 | Introduction to Oral Translation | 3 |
| SPT 4801 | Translation Practica | 3 |
| SPT 4802 | Oral Translation Practica | 3 |

**Required Courses:** (9)

| | | |
|---|---|---|
| SPT 4803 | Practica in Legal Translation | 3 |
| SPT 4809 | Practica in Medical Translation | 3 |
| SPT 4807 | Practica in Business Translation | 3 |
| SPT 4808 | Practica in Technological Translation | 3 |
| SPT 4805 | Translation in Communication Media | 3 |

**Restrictive Electives**

One course from the following

| | | |
|---|---|---|
| ENC 3343 | Technical Writing | 3 |
| ENC 4242 | Scientific Writing | 3 |
| SPN 3500 | Culture I | 3 |
| SPN 3415 | Communication Arts | 3 |

**Free Electives**

Two Courses from the following

| | | |
|---|---|---|
| ACG 3021 | Accounting for Decisions | 3 |
| COP 2172 | Programming in BASIC | 3 |
| ECO 30213 | Economics, Man and Society, Micro | 3 |
| ECO 3011 | Economics, Man and Society, Macro | 3 |
| ENC 3200 | Business Letters and Reports | 3 |
| HUN 2201 | Principles of Nutrition | 3 |
| INR 3403 | International Law | 3 |
| INR 4033 | International Communications | 3 |
| JOU 3100 | News Reporting | 3 |
| MAN 3602 | International Business | 3 |
| MAN 3701 | Business and Society | 3 |
| MRE 3001 | Medical Terminology | 3 |
| MRE 4301 | Fundamentals of Medical Science | 3 |
| POS 2002 | Introduction to Politics | 3 |
| RTV 4101 | Writing for the Electronic Media | 3 |
| RTV 4302 | Broadcasting for Reporting (Prerequisite JOU 3100) | 3 |
| SYG 3002 | The Basic Ideas of Society | 3 |
| SPN 4440 | Spanish for Business | 3 |
| SPN 4501 | Special Topics in Civilization and Culture (Prerequisite SPN 3500) | 3 |

In addition to these subjects, the free electives may be chosen from the offerings in the departments of Sociology/Anthropology, Communication, Computer Science, Economics, International Relations, Modern Languages, and Political Science by securing the approval of the Director of the Program.

## Tropical Commercial Botany Professional Certificate Program

**David Lee,** *Director* (Biological Sciences)

*Coordinating Committee*

**George Dalrymple,** *(Biological Sciences)*

**Kelsey Downum,** *(Biological Sciences)*

**Suzanne Koptur,** *(Biological Sciences)*

**Steven Oberauer,** *(Biological Sciences)*

**Jennifer Richards,** *(Biological Sciences)*

**Jack B. Fisher,** *(Fairchild Tropical Garden)*

**William Houghton,** *(Fairchild Tropical Garden)*

**Tommy Manler,** *(Fairchild Tropical Garden)*

**Robert Sanders,** *(Fairchild Tropical Garden)*

**Terrence Walters,** *(Fairchild Tropical Garden)*

This Certificate Program provides background in the plant sciences, principally for those with practical experience in horticulture. The curriculum is designed to give solid information on the plants being grown: their anatomy and morphology, reproduction, taxonomy, development and physiology. This background should prepare students for work in the more technical aspects of horticulture in South Florida. Those fulfilling its requirements, along with a B.S. degree in Biological Sciences or Environmental Studies, would have excellent preparation for post-graduate work in Botany or Horticulture.

**Certificate Requirements**

**Lower or Upper Division Preparation;**

Two semesters of college-level chemistry;

Mathematics through College Algebra (such as MAC 2132);

Practical Horticultural Experience.

**Required Courses:** (16)

| | | |
|---|---|---|
| BOT 2010C | Plant Biology | 4 |
| BOT 3353C | Morphology of Vascular Plants | 4 |
| BOT 4504 | Plant Physiology | 3 |
| BOT 4504L | Plant Physiology Laboratory | 1 |
| BOT 3723C | Taxonomy of Tropical Plants | 4 |

**Electives**

Two courses from the following (6-8)

| | | |
|---|---|---|
| BOT 3810 | Economic Botany | 3 |
| BOT 4314C | Plant Development | 4 |
| PCB 3043 | Ecology | 3 |
| PCB 3043L | Ecology Lab | 1 |
| EVR 3010 | Energy Flow in Natural and Man-Made Systems | 3 |
| ENY 3004 | General Entomology | 3 |
| ENY 3004L | General Entomology Lab | 1 |
| ACG 3021 | Accounting for Decisions | 3 |
| ARC 3127C | Graphic Communication | 3 |
| LAA 3370C | Landscape Design I | 3 |
| | | 22-24 |

All courses require a grade of 'C' or higher.

## Western Social and Political Thought Certificate Program

**Brian Nelson,** Director (Political Science)

*Coordinating Committee*

**Charles Elkins,** *(English)*

**Steven Fjellman,** *(Anthropology/ Sociology)*

**Bruce Hauptli,** *(Philosophy/Religion)*

**Antonio Jorge,** *(International Relations)*

**Eric Leed,** *(History)*

**Barry Levine,** *(Sociology)*

The Certificate Program provides interested students with a broad background in the history of western social and political thought. As such, the Certificate student will be expected to take courses from a variety of disciplines and at least three tutorials. Each tutorial will concentrate on one prescribed book which will be the same for all students. At the beginning and end of each semester the students will meet as a group with the instructors in the Program to discuss the different perspectives which they have developed on the common subject matter.

**Course Requirements**

A total of five courses in prescribed Certificate courses and three tutorials with a grade of 'C' or higher.

Four courses in three historical eras (Ancient-Medieval, Modern, and Contemporary) from at least three different departments (Economics, English, History, Philosophy/ Religion, Political Science, Sociology/ Anthropology).

IDS 4920, Liberal Studies Colloquium on 'Visions of Order and Revolt'. (Under exceptional circumstances another course may be substituted with the advisors approval).

Three independent study tutorials taken in three semester blocs.

**Admission to the Program**

Admission to the program will be by invitation from a member of the certificate faculty, or by request from the student. In either case, final approval for admission rests with the Coordinating Committee of the Certificate Program. GPA, intellectual interests, and academic potential will be the criteria considered for admission to the Program.

**Advising**

The student's advisor will be the designated Certificate representative in his or her major. It is the function of the Certificate advisor to aid students in the selection of relevant courses, to insure that all Certificate requirements have been completed before graduation, and to assign the tutorial grades. Students who are majoring in a discipline other than those listed will be advised by the Director of the Certificate Program or, by mutual agreement, by another advisor of the students choice. Students are responsible for contacting their advisor on the progress of their coursework and other matters related to completion of Certificate requirements.

**Course Listing**

The following list may be modified from time to time. The student should consult with his or her advisor about current course offerings.

**Ancient-Medieval**

| | | |
|---|---|---|
| HIS 3001 | Introduction to History | 3 |
| HUM 3214 | Ancient Classical Culture and Civilization | 3 |
| LIT 4403 | Literature Among the Arts and Science[1] | 3 |
| PHH 3100 | Ancient Philosophy | 3 |
| PHH 3200 | Medieval Philosophy | 3 |
| PHM 3200 | Social and Political Philosophy[2] | 3 |
| PHM 4400 | Philosophy of Law[1] | 3 |
| POT 3013 | Ancient and Medieval Political Theory | 3 |
| POT 4930 | Topics in Political Theory [2] | 3 |
| POT 5934 | Topics in Political Theory [2] | 3 |

**Modern**

| | | |
|---|---|---|
| ENL 4320 | Shakespeare's Histories | 3 |
| ENL 4321 | Shakespeare's Comedies | 3 |
| ENL 4322 | Shakespeare's Tragedies | 3 |
| EUH 3142 | Renaissance and Reformation | 3 |
| EUH 4453 | French Revolution and Enlightenment | 3 |
| EUH 4286 | Topics in European Intellectual History | 3 |
| LIT 3200 | Themes in Literature | 3 |
| LIT 4403 | Literature Among the Arts and Sciences | 3 |
| PHM 3200 | Social and Political Philosophy[1] | 3 |
| PHM 4400 | Philosophy of Law[1] | 3 |
| POT 3054 | Modern Political Theory I | 3 |
| POT 3204 | American Political Thought [1] | 3 |
| POT 4930 | Topics in Political Theory [2] | 3 |
| POT 5934 | Topics in Political Theory [2] | 3 |

**Contemporary**

| | | |
|---|---|---|
| AMH 3331 | American Intellectual History[1] | 3 |
| ANT 3086 | Anthropological Theories | 3 |
| ECO 3303 | The Development of Economic Thought | 3 |
| ECO 4321 | Radical Political Economy | 3 |
| EUH 4286 | Topics in European Intellectual History | 3 |
| LIT 4403 | Literature Among the Arts and Sciences[2] | 3 |
| PHM 3200 | Social and Political Philosophy[1] | 3 |
| PHM 4203 | Contemporary Social and Political Issues | 3 |
| PHM 4400 | Philosophy of Law[1] | 3 |
| PHP 4510 | Marxism | 3 |
| POT 3064 | Contemporary Political Theory | 3 |
| POT 3302 | Political Ideologies | 3 |
| POT 3204 | American Political Thought [1] | 3 |
| POT 4930 | Topics in Political Theory [2] | 3 |
| POT 5934 | Topics in Political Theory [2] | 3 |
| SYG 3002 | The Basic Ideas of Sociology | 3 |
| SYA 4010 | Sociological Theories | 3 |
| SYO 4300 | Political Sociology | 3 |

| | | |
|---|---|---|
| SYA 4011 | Advanced Social Theory | 3 |

[1]Thematic Courses that cover more than one historical period.

[2]Depending on subject taught, these courses may cover one or more than one historical period. Students should consult their advisor before enrolling.

## Women's Studies Certificate Program

**Marilyn Hoder-Salmon,** *Director, Women's Studies Center*

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**Rusty Belote,** *(Student Affairs)*
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**Mary Levitt,** *(Psychology)*
**Kathleen McCormack,** *(English)*
**Carmen Mendez,** *(Public Affairs)*
**Sally Pell,** *(Education)*
**Jennifer Richards,** *(Biology)*
**Rebecca Salokar,** *(Political Science)*
**Tanya Saunders-Hamilton,** *(Multilingual/Cultural Center)*
**Regina Shearn,** *(Criminal Justice)*
**Betsy Smith,** *(Social Work)*
**Karen Sowers-Hoag,** *(Social Work)*
**Susan Waltz,** *(International Relations)*

The Women's Studies Certificate Program provides an opportunity for students to integrate scholarship about women from a variety of disciplines into a coherent program of study. The Certificate program includes a core of required courses central to an understanding of women in a social and historical context. The courses provide a basic grounding in Women's Studies that should be useful in many other courses. The core courses are supplemented by a variety of electives to be chosen according to the particular student's specific interests. The Certificate program seeks to provide a balance to the traditional academic curriculum and also offers pragmatic vocational learning.

A student may acquire the Certificate in Women's Studies by fulfilling the following requirements:

**Three required Core Courses of the following:**

| | | |
|---|---|---|
| AMH 4560 | History of Women in the United States | 3 |
| SOP 3742 | Psychology of Women | 3 |
| SYD 4810 | Sociology of Gender | 3 |
| LIT 3383 | Women and Literature | 3 |
| WST 3010 | Introduction to Women's Studies | 3 |
| | or | |
| IDS 3930 | Foundations of Liberal Studies | |
| | or | |
| HUM 3930 | Female/Male: Woman's Studies Seminar | |

**Three electives from the following partial list:**

| | | |
|---|---|---|
| ANT 3302 | Male and Female: Sex Roles and Sexuality | 3 |
| ANT 4930 | Voices of Third World Women | 3 |
| CCJ 4663 | Women, Crime and the Criminal Justice System | 3 |
| ENG 4132 | Women and Film | 3 |
| FOW 3520 | Women Writers and Cultural Identity | 3 |
| HIS 4935 | Women in Latin America | 3 |
| MAN 4102 | Women and Men in Management | 3 |
| PAD 5435 | Administration and the Role of Women | 3 |
| PHM 4123 | Philosophy and Feminism | 3 |
| POS 4930 | Gender Justice and the Courts | 3 |
| REL 4992 | Women and Religion | 3 |
| SOW 5217 | Feminist Therapy | 3 |
| SOW 5621 | Crises in Lives of Women | 3 |
| SYD 4810 | Role of Women in Contemporary Society | 3 |
| WOH 3280 | History of Women | 3 |

In any particular semester, appropriate special topics courses may be taken as electives with approval.

The Center is located in DM 212/214, University Park, 348-2408. Students may contact the Women's Studies Center director, University Park, DM 212/214, 348-2408, or the Certificate Committee Coordinator, North Miami Campus, 940-5859 for further information.

# College of Arts and Sciences

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*Associate Dean, Curriculum and Advisement* **Fred Bouma**
*Associate Dean, Budget and Development* **Samuel Shapiro**
*Associate Dean, North Miami,* **Joyce Peterson**
*Director, School of Computer Science* **Jainendra Navlakha**
*Director, School of Journalism and Mass Communication* **J. Arthur Heise**

**Chairpersons and Program Directors:**

*Biological Sciences* **Walter Goldberg**
*Chemistry* **Leonard Keller**
*Economics* **Raul Moncarz**
*English* **Asher Milbauer**
*Environmental Studies* **John Parker**
*Geology* **Florentin Maurrasse**
*History* **Mark Szuchman**
*Humanities* **Ramon Mendoza**
*International Relations* **Ralph Clem**
*International Studies* **Susan Waltz**
*Liberal Studies* **Janat Parker**
*Mathematics* **Dev Roy**
*Modern Languages* **Isabel Castellanos**
*Music* **John Augenblick**
*Philosophy and Religious Studies* **Bruce Hauptli**
*Physics* **Richard Bone**
*Political Science* **Joel Gottlieb**
*Psychology* **Paul Foos**
*Sociology and Anthropology* **Lisandro Perez**
*Statistics* **Carlos W. Braln**
*Theatre and Dance* **Marilyn Skow**
*Visual Arts* **William Maguire**

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**Ritter, David, Ph.D.** *(Louisiana State University), Associate Professor, Mathematics*

**Roca, Ana, D.A.** *(University of Miami), Assistant Professor, Modern Languages*

**Rochelson, Meri-Jane, Ph.D.** *(University of Chicago), Assistant Professor, English*

**Rock, Howard, Ph.D.** *(New York University), Associate Professor, History*

**Rogerson, Kenneth, Ph.D.** *(University of California at San Diego), Associate Professor, Philosophy and Religious Studies*

**Rohm, Joseph, Ph.D.** *(Florida State University), Associate Professor, Music*

**Rose, Patricia, M.B.A.** *(University of Miami), Associate Professor, School of Journalism and Mass Communication*

**Rosenberg, Mark, Ph.D.** *(University of Pittsburgh), Professor, Political Science, and Director of Latin American and Caribbean Center*

**Rosenthal, Michael, M.S.** *(University of Miami), Instructor, Mathematics*

**Rotton, James, Ph.D.** *(Purdue University), Associate Professor, Psychology*

**Roy, Dev, Ph.D.** *(University of Rochester), Associate Professor,and Chairperson, Mathematics*

**Rubenberg, Cheryl, Ph.D.** *(University of Miami), Associate Professor, Political Science*

**Rubin, Richard, Ph.D.** *(Washington University), Associate Professor, Mathematics*

**Ruttenberg, Robert, M.A.** *(New York University), Associate Professor, School of Journalism and Mass Communication*

**Salazar-Carrillo, Jorge, Ph.D.** *(University of California at Berkeley), Professor, Economics and Director, Center of Economic Research anf Education*

**Salokar, Rebecca, Ph.D.** *(Syracuse University), Assistant Professor, Political Science*

**Salvador, Miguel, D.M.A.** *(University of Miami), Assistant Professor, Music*

**Sanchez, Juan, Ph.D.** *(University of South Florida), Assistant Professor, Psychology*

**Sanders, Roger, Ph.D.** *(University of Texas at Austin), Research Scientist, Biological Sciences*

**Sanchez, Reinaldo, Ph.D.** *(Washington University), Professor, Modern Languages*

**Saper, Bernard, Ph.D.** *(University of California at Los Angeles), Professor, Psychology*

**Sauleda, Orlando, M.S.** *(Florida International University), Instructor, School of Computer Science*

**Schwartz, Richard, Ph.D.** *(University of Chicago), Associate Professor, English*

**Sen, Gautam, Ph.D.** *(University of Texas at Dallas), Associate Professor, Geology*

**Sevilla, Carlos, Ph.D.** *(Stanford University), Assistant Professor, Economics*

**Shapiro, Samuel S., Ph.D.** *(Rutgers University), Professor, Statistics and Associate Dean, College of Arts and Sciences*

**Sheldon, John, Ph.D.** *(Texas A&M University), Professor, Physics*

**Shershin, Anthony, Ph.D.** *(University of Florida), Associate Professor, Mathematics*

**Shore, Minna, Ph.D.** *(Leningrad Technical Institute), Instructor, Mathematics*

**Silverman, Wendy, Ph.D.** *(Case Western Reserve University), Associate Professor, Psychology*

**Silverstein, Ronn, M.A.** *(Sir George Williams University, Montreal), Instructor, English*

**Skow, Marilyn, M.Ph.** *(Columbia University), Associate Professor and Chairperson, Theatre and Dance*

**Slifker, James, Ph.D.** *(University of Notre Dame), Associate Professor, Mathematics*

**Sprechman, Ellen, Ph.D.** *(University of Miami), Lecturer, English*

**Stack, John, Jr., Ph.D.** *(University of Denver), Professor, Political Science*

**Standiford, Lester, Ph.D.** *(University of Utah), Associate Professor, English and Director, Creative Writing Program*

**Stayman, Andree, M.A.** *(University of Miami), Instructor, Modern Languages*

**Stein, Mel, B.A.** *(Hofstra College), Lecturer/Creative Director-in-Residence, School of Journalism and Mass Communication*

**Stepick, Alex, Ph.D.** *(University of California at Irvine), Associate Professor, Sociology/Anthropology*

**Stiehm, Judith, Ph.D.** *(Columbia University), Professor, Political Science and University Provost*

**Sugg, Richard, Ph.D.** *(University of Florida), Professor, English*

**Sun, Wei, Ph.D.** *(University of Illinois-Chicago Circle), Assistant Professor, School of Computer Science*

**Sweet, William, Ph.D.** *(University of Maryland), Assistant Professor, Mathematics*

**Szuchman, Mark, Ph.D.** *(University of Texas), Professor and Chairperson, History*

**Tal, Doron, Ph.D.** *(Ben Gurion University, Israel), Assistant Professor, School of Computer Science*

**Ticknor, Donna, Ph.D.** *(University of Florida), Lecturer, Chemistry*

**Todd, Therald, Ph.D.** *(University of Oregon), Associate Professor, Theatre and Dance*

**Torres, Manuel, Ph.D.** *(University of New Mexico), Associate Professor, Visual Arts*

**Tracey, Martin, Ph.D.** *(Brown University), Professor, Biological Sciences*

**Treadgold, Warren, Ph.D.** *(Harvard University), Assistant Professor, History*

**Vagramian-Nishanian, Violet, Ph.D.** *(University of Miami), Professor, Music*

**Van Hamme, Walter, Ph.D.** *(University of Ghent, Belgium), Assistant Professor, Physics*

**Veraldi, Lorna, J.D.** *(New York School of Law), Assistant Professor, School of Journalism and Mass Communication*

**Vickers, William, Ph.D.** *(University of Florida), Professor, Sociology/Anthropology*

**Villamor, Enrique, Ph.D.** *(Washington University), Assistant Professor, Mathematics*

**Volcansek, Mary, Ph.D.** *(Texas Tech University), Professor, Political Science*

**Wainwright, Peter, Ph.D.** *(University of Chicago), Assistant Professor, Biological Sciences*

**Waltz, Susan, Ph.D.** *(University of Denver), Associate Professor, International Relations and Director of International Studies*

**Wang, Xuewen, Ph.D.** *(Iowa State University), Assistant Professor, Physics*

**Warren, Christopher, D.A.** *(Lehigh University), Associate Professor, Political Science*

**Warren, Paul, Ph.D.** *(University of Wisconsin-Madison), Assistant Professor, Philosophy and Religious Studies*

**Watson, Donald, Ph.D.** *(University of Virginia), Professor, English*

**Watson-Espener, Malda, Ph.D.** *(University of Florida), Associate Professor, Modern Languages*

**Watts, Barbara, Ph.D.** *(University of Virginia), Assistant Professor, Visual Arts*

**Waugh, Butler, Ph.D.** *(Indiana University), Professor, English*

**Webb, James, Ph.D.** *(University of Florida), Assistant Professor, Physics*

**Weeks, Ophelia, Ph.D.** *(Howard University), Assistant Professor, Biological Sciences*

**Weinberger, Robert, M.A.** *(Columbia University), Instructor, English*

**Weiss, Mark, Ph.D.** *(Princeton), Assistant Professor, School of Computer Science*

**Weitz, Barbara, M.S.** *(Florida International University), Instructor, English*

**Welch, Marcelle, Ph.D.** *(University of Michigan), Associate Professor, Modern Languages*

**West, Lois, Ph.D.** *(University of California at Berkeley), Assistant Professor, Sociology/Anthropology and Women's Studies*

**Wilkins, Mira, Ph.D.** *(University of Cambridge), Professor, Economics*

**Williams, C. Kemp, Ph.D.** *(Indiana University), Assistant Professor, English and Director, Linguistics*

**Williams, Willie, Ph.D.** *(Michigan State University), Associate Professor, Mathematics*

**Willumsen, Maria, Ph.D.** *(Cornell University), Assistant Professor, Economics*

**Winkle, Stephen, Ph.D.** *(University of California at Berkeley), Associate Professor, Chemistry*

**Winters, Sandra, M.F.A.** *(Cornell University), Assistant Professor, Visual Arts*

**Wright, William, M.A.** *(Pennsylvania State University), Associate Professor, School of Journalism and Mass Communication*

**Wolfe, Gregory Baker, Ph.D.** *(The Fletcher School of Law and Diplomacy), Professor, International Relations*

**Yavas, Mehmet, Ph.D.** *(University of Kansas), Associate Professor, English*

**Yudin, Florence, Ph.D.** *(University of Illinois), Professor, Modern Languages*

**Zahedi-Jasbi, Hassan, Ph.D.** *(University of California at Riverside), Associate Professor, Statistics*

**Zalkikar, Jyotin, Ph.D.** *(University of California at Santa Barbara),Assistant Professor, Statistics*

**Zwelbel, John, Ph.D.** *(Columbia University), Assistant Professor, Mathematics*

# College of Business Administration

The College of Business Administration (CBA) offers academic programs leading to the undergraduate degrees of Bachelor of Business Administration and Bachelor of Accounting and to the graduate degrees of Master of Accounting (M.Acc.), Master of Business Administration (M.B.A.), Master of International Business (M.I.B.), Master of Science in Finance (M.S.F.), Master of Science in Management Information Systems, (M.S. in MIS), Master of Science in Taxation (M.S.T.), and Doctor of Philosophy in Business Administration (Ph.D.).

The College is organized into the School of Accounting and Departments of Decision Sciences and Information Systems, Finance, Management and International Business, and Marketing and Environment.

*Note*: The programs, policies, requirements, and regulations listed in this catalog are continually subject to review in order to serve the needs of the University's various publics and to respond to the mandates of the Florida Board of Regents and the Florida Legislature. Changes may be made without advance notice. Please refer to the General Information section for the University's policies, requirements, and regulations.

### Academic Standards

1. CBA undergraduates must earn a grade of 'C' or higher in all major courses.

2. CBA undergraduates will be required to pass a Readiness Examination prior to registration in ACG 3301 and ACG 4101.

3. Undergraduate and graduate students may not enroll more than twice in any CBA course without the written permission of the Dean. This permission will be granted only in those exceptional cases where failure to complete a course successfully is demonstrated to be unrelated to classroom performance.

4. All CBA students must satisfy the requirements of their respective programs of study and, additionally, must satisfy all University requirements for graduation.

5. See University General Information regarding Academic Warning, Probation, and Dismissal.

### Undergraduate Programs

All students must have a program of study completed by the end of their first semester. Entering Accounting majors should call the School of Accounting, 348-2581, to make a program counselling appointment. All other majors should call 348-2781 at University Park, or 940-5870 at the North Miami Campus. At the time of the appointment the appropriate counselor will assist the student in completing a formal program of study. (A program of study is one that has been completed and signed by the student and the counselor). Questions of interpretation regarding course or degree requirements will be resolved at the time the program of study is developed. If, for some reason, a program of study is not completed at least two semesters before a student is expected to graduate, the student may not be permitted to register for future classes.

Undergraduate students majoring in non-business areas will not be permitted to apply more than 30 semester hours of business courses toward their degree.

Additionally, students who register for any graduate business course must be formally admitted to a graduate certificate or graduate degree program at the University. Applicants to the College must submit an Application for Admission to the University and must follow the regular University admission procedures. Applicants must be eligible for admission to the University before admission to the College.

An undergraduate student is required to have completed the Associate in Arts degree or its equivalent, and is encouraged to have some knowledge of accounting, mathematics, computer programming, speech and economics (accounting majors should also have coursework in the areas of calculus and logic). The broad liberal arts exposure inherent in the Associate in Arts degree usually enables a student to complete the Bachelor of Business Administration requirements in the equivalent of two years, and to take most of the professional work within the College.

This professional work includes:

1. Pre-core courses where necessary;

2. Certain required courses designed to provide the student with a common body of knowledge, including:

a. A background of concepts and processes in the marketing, production, and financing of goods and services in the business enterprise and related organizations, both domestically and internationally;

b. A background of the economic and legal environment as it pertains to profit and non- profit organizations along with ethical, social, and political influences;

c. A basic understanding of concepts and applications in accounting, quantitative methods, computers, and management information systems;

d. A study of communication theory, behavior, and interpersonal communications;

e. A study of administrative processes and decision-making under conditions of uncertainty, including policy analysis at the overall management level;

3. Courses required for the student's major;

4. Approved elective courses.

The student entering an undergraduate program of the College is required to meet the following standards:

1. 60 semester hours completed.

2. Grade point average of 2.5 or higher. Business courses taken at the University are not included in this computation.

3. Satisfaction of general University requirements for admission, including, in this case, the general education requirements. The general education requirements are: English composition, humanities, social science, natural science, and mathematics.

If a student has a GPA higher than 2.5 and is deficient in no more than six semester hours of general education requirements, the student may still be accepted into the undergraduate program. However, all lower-division deficiencies must be completed during the student's first two semesters at the University.

### Time Limit

All undergraduate business coursework (including prerequisites) must be earned within seven years immediately preceding the awarding of the degree.

### Upper-division Transfer

Previous credit may be considered acceptable for transfer toward upper-level academic study in the College if the credit was earned within the last six years, was designated as junior-senior level credit at an accredited four year upper-level institution, a grade of 'C' or higher was earned, or can be validated by some acceptable measure to verify its equivalence. Students wishing to transfer to the College must be in good standing at their previous school or college.

### Undergraduate Majors

Major programs leading to the Bachelor's degree are offered in Accounting, Finance, Management, Personnel Management, Management Information Systems, and Marketing. A second major in International Business may be obtained in addition to any of these business functional majors. Non-business majors

must meet all College of Business Administration requirements (including the core courses) to be eligible for a second major in Business.

### Change of Major

Any student changing to a new major within the College of Business Administration from another college or school in the University must meet degree requirements in effect at the time of the change of major.

### Residency Requirements

A student must complete the last 30 semester hours of course work at the University to qualify for the undergraduate degrees.

### Readmission

An admitted degree-seeking student who has not enrolled in any course at the University for three consecutive semesters or more is eligible for readmission under the University and program regulations in effect at the time of readmission.

### Degree Requirements

See University General Information.

## Undergraduate Business Program Requirements

### Lower-division Preparation

The following courses, in addition to the other requirements for the Associate in Arts degree, should be a part of the 60 semester hours of lower-division coursework completed in order to enter any CBA upper-division major: six semester hours of accounting; six semester hours of economics; three semester hours of college algebra; three semester hours of business statistics; three semester hours of computer programming, three semester hours of public speaking, and three semester hours of legal environment of business. If completed at the University, this coursework will normally be taken in addition to the 60 semester hours of required upper-division work.

FIU undergraduates must have met all the lower-division requirements including CLAST, completed 60 semester hours, and must be otherwise acceptable into CBA programs.

### Computer Programming Proficiency Requirement

The rapidly increasing need of the professional administrator for exposure to computer technology and terminology requires that fundamental expertise in this area be achieved.

Therefore, prior to enrollment in CGS 3300 (or ACG 4401), each student must demonstrate computer programming proficiency. This requirement may be completed in any of the following ways:

1. Successful completion of a computer programming course at the lower-division.

2. Successful completion of CGS 2060 Microcomputer Applications.

3. Work experience with verification by employer. Further details may be obtained from the undergraduate counseling office.

### Upper-Division Program

**Pre-Core Courses Required for Business Administration Students:** (21)

| | | |
|---|---|---|
| ACG 3021 | Accounting for Decisions | 3 |
| CGS 2060 | Microcomputer Applications | 3 |
| ECO 3021 | Economics, Man and Society-Micro | 3 |
| ECO 3011 | Economics, Man and Society-Macro | 3 |
| STA 3132 | Business Statistics | 3 |
| SPC 2600 | Public Speaking | 3 |
| BUL 3100 | Legal Environment of Business[1] | 3 |

The above courses will be waived if the student received a grade of 'C' or higher in the appropriate lower-division courses. A student should see a counselor to determine whether these courses should or should not be added to the program of study. Upper-division credit will not be given for STA 3132, ECO 3021, ECO 3011, ACG 3021, CGS 2060, BUL 3100, MAC 3233, and PHI 2100, or comparable courses taken at the lower level.

**Core Courses Required for Business Administration Students:** (33-36)

| | | |
|---|---|---|
| ACG 3301 | Accounting for Planning and Control | 3 |
| CGS 3300 | Introduction to Information Systems[1] | 3 |
| ECO 3431 | Applied Macroeconomics | 3 |
| FIN 3403 | Financial Management | 3 |
| GEB 3112 | Entrepreneurship & Organization | 3 |
| MAN 3025 | Organization and Management | 3 |
| MAN 3602 | International Business | 3 |
| MAN 3701 | Business and Society | 3 |
| MAN 4504 | Operations Management | 3 |
| MAN 4722 | Policy Analysis | 3 |
| MAR 3023 | Marketing Management | 3 |
| QMB 3150 | Applications of Quantitative Methods in Business | 3 |

[1]This course should not be taken by students majoring in accounting. (See model schedule for accounting majors).

| | |
|---|---|
| Major: Required Credits | 12-24 |
| Approved Elective Credits | 3-12 |

*Note*: All electives must be approved in advance by the Counseling Office.

### Business Core Courses

As noted under CBA General Information (Academic Standards), undergraduates must pass a Readiness Examination in Accounting as a prerequisite for registration in ACG 3301. The core courses and prerequisites in the College are as follows:

FIN 3403 Financial Management - ACG 3021 or its equivalent.

MAR 3023 Marketing Management

QMB 3150 Application of Quantitative Methods in Business - STA 3132, or its equivalent, and college algebra.

CGS 3300 Introduction to Information Systems - computer programming proficiency requirement or CGS 2060.

ACG 3301 Accounting for Planning and Control - at least six semester hours of introductory financial and managerial accounting with a grade of 'C' or higher; or ACG 3021 with a grade of 'C' or higher; and successful completion of a readiness examination.

MAN 4504 Operations Management - QMB 3150.

MAN 3025 Organization and Management

MAN 3701 Business and Society - ECO 3021 and ECO 3011 or equivalent.

MAN 3602 International Business - ECO 3431.

ECO 3431 Applied Macroeconomics - ECO 3021 and ECO 3011 or equivalent.

MAN 4722 Business Policy - Completion of all core course requirements. Course should be taken in the student's last academic semester before graduation

## School of Accounting

**Lewis F. Davidson,** *Professor and Director*

**Lucia S. Chang,** *Professor and Associate Director*

**Rolf Auster,** *Professor*

**Delano H. Berry,** *Instructor*

**William L. Campfield,** *Professor Emeritus*

**Jack L. Carter,** *Assistant Professor*

**Yong S. Choe,** *Assistant Professor*

**Manuel Dieguez,** *Instructor*

**Mortimer Dittenhoffer,** *Professor*

**Donald W. Fair,** *Instructor and Associate Dean*
**Min H. Guo,** *Assistant Professor*
**Georgina Garcia,** *Lecturer*
**Rosalie C. Hallbauer,** *Associate Professor*
**Harvey S. Hendrickson,** *Professor*
**Kevin Kemerer,** *Assistant Professor*
**David Lavin,** *Associate Professor*
**Myron S. Lubell,** *Associate Professor*
**Kenneth S. Most,** *Professor*
**Charles A. Nickerson,** *Professor*
**Leandro S. Nunez,** *Lecturer*
**Robert B. Oliva,** *Associate Professor*
**Felix Pomeranz,** *Distinguished Lecturer, and Director, Center for Accounting, Auditing, and Tax Studies*
**Leonardo Rodriguez,** *Professor and Vice President, Business and Finance*
**Bernadette Ruf,** *Assistant Professor*
**Robert W. Rutledge,** *Assistant Professor*
**Paul J. Schlacter,** *Assistant Professor*
**John T. Sennetti,** *Professor*
**Barbara T. Uliss,** *Instructor*
**Richard H. Wiskeman, Jr.,** *Lecturer*
**John Wrieden,** *Lecturer*
**Harold E. Wyman,** *Professor and Dean*
**Shu Yeh,** *Assistant Professor*
**Doria Yeaman,** *Associate Professor*

## Bachelor of Accounting (B.Acc.)

The B.Acc. program prepares students for positions in public, corporate management, and governmental accounting. For positions in public accounting, students must take the CPA examination, which in Florida requires an additional 30 semester hours beyond the B.Acc. degree. The B.Acc. program also provides students seeking advanced accounting, business, or law degrees with an appropriate foundation for those studies.

The accounting program consists of four parts requiring 123 hours of course work:

| Part | Hours |
|---|---|
| Lower-Division/Business Pre-Core | 60 |
| Upper-Division/Business Core | 33 |
| Accounting Core | 21 |
| Approved Accounting Electives | 9 |

The lower division/business pre-core requirements are described in the University General Information and CBA Undergraduate Business Requirements. As part of the lower division/business pre-core requirements, B.Acc. majors must complete MAC 3233 (Calculus) and PHI 2100 (Introduction to Logic) or equivalent courses. Students must complete all lower division/business pre-core requirements no later than the first semester of the third year of undergraduate study.

The upper division business core requirements are described in the College of Business Administration Upper-Division Program.

### Accounting core requirements

| | |
|---|---|
| ACG 4101 | Financial Accounting I |
| ACG 4111 | Financial Accounting II |
| ACG 4341 | Management Accounting |
| ACG 4401 | Accounting Information Systems |
| ACG 4651 | Auditing |
| BUL 4111 | Business Law I |
| TAX 4001 | Income Tax Accounting |

All courses in the accounting core must be taken at this University, i.e., courses in accounting are not transferable unless approved in advance by the Director of the School of Accounting.

The elective requirements are three courses approved by the Director of the School of Accounting.

### Model Schedule—B.Acc. Major

Below is a model schedule for a typical full-time B.Acc. major who has completed all of the 60 hours of lower division requirements. Deviations from this schedule must be approved by the Director of the School of Accounting. (The student possessing a non-business baccalaureate degree should consult the School of Accounting for alternative programs that meet the Florida State Board of Accountancy requirements).

| Semester 1 | Semester 2 |
|---|---|
| ACG 3301 | MAR 3023 |
| ACG 4401 | GEB 3112 |
| FIN 3403 | MAN 3025 |
| QMB 3150 | ACG 4101 |
| ECO 3431 | |
| **Semester 3** | **Semester 4** |
| ACG 4111 | TAX 4001 |
| ACG 4341 | ACG 4651 |
| BUL 4111 | MAN 3602 |
| MAN 3701 | MAN 4504 |
| **Semester 5** | **Semester 6** |
| Elective | MAN 4722 |
| Elective | Elective |

### Policy for Continuation as a B.Acc Major

1. Students must earn a minimum grade of 'C' in all 4000 level accounting, business law, and tax courses.

2. Students not achieving a grade of 'C' or better in two enrollments in any course will be dropped from the Accounting program. In extenuating circumstances, continuation in the program may be possible after a written appeal to the Continuation and Retention Committee. Appeals should be directed to the Director of the School of Accounting. A student may have no more than three re-enrollments.

3. Students who wish to take more than two accounting and tax courses in one semester must submit a written appeal to the Continuation and Retention Committee.

4. Prerequisites for all accounting and tax courses are strictly enforced.

5. Students taking accounting and tax courses are expected to seek counsel from Accounting advisors prior to registration.

6. Students working more than 20 hours per week are strongly urged to discuss with an Accounting advisor the composition of their schedule and number of courses they should take.

## Decision Sciences and Information Systems

**Daniel Robey,** *Professor and Chairperson*
**Dinesh Batra,** *Assistant Professor*
**Joyce J. Elam,** *Professor and James L. Knight Eminent Scholar*
**Sushil K. Gupta,** *Professor and Vice Provost*
**Peeter J. Kirs,** *Assistant Professor*
**Christos P. Koulamas,** *Assistant Professor*
**Jerzy Kyparisis,** *Associate Professor*
**Tomislav Mandakovic,** *Professor*
**Krishnamurty Muralidhar,** *Assistant Professor*
**Elena Pernas,** *Instructor*
**Rajiv Sabherwal,** *Assistant Professor*
**Radhika Santhanam,** *Assistant Professor*
**Maung K. Sein,** *Assistant Professor*
**Larry A. Smith,** *Associate Professor*
**Steve H. Zanakis,** *Professor*
**Peter J. Zegan,** *Lecturer*

The Department of Decision Sciences and Information Systems offers coursework in the areas of Management Information Systems, Management Science, Production/Operations Management, and Business Statistics at both the graduate and undergraduate levels. Students may pursue at the undergraduate level a major in Management Information Systems; and at the graduate level a Master of Science in Management Information Systems. The Department also offers a doctoral concentration in Information Systems.

### Management Information Systems

The undergraduate program in Management Information Systems (MIS) emphasizes the design, development, implementation, and use of information technology to solve organizational problems effectively. The program is designed to prepare graduates for entry-level positions in the profession of MIS, whether in user or in system departments. This program is a natural continuation for students who have completed a business data processing program at the lower division.

The MIS program is composed of the following three parts:

**Business Core:** 12 courses (36 semester hours)

See General Business Requirements.

### Major Courses

Four courses (12 semester hours)

| | | |
|---|---|---|
| ISM 4113 | Systems Analysis and Design | 3 |
| ISM 4210 | Data Base Applications | 3 |
| ISM 4151 | Systems Management | 3 |
| ISM 4340 | Organizational Impacts of Information Systems | 3 |

### Electives

Four courses (12 semester hours)

Electives should be taken from approved courses in Computer Science, Business, or other Departments. CGS 3403 COBOL for Non-Computer Science Majors or COP 3120 Data Processing and COBOL, or equivalent, must be taken before ISM 4210.

CGS 3403 or COP 3120 may be counted as an elective. CGS 3300 Introduction to Information Systems is part of the Business Core and may not be counted as an elective.

## Finance

**Arun Prakash,** *Professor and Chairperson*
**Gary Anderson,** *Assistant Professor*
**Robert Bear,** *Professor and Director, Broward Programs*
**William R. Beaton,** *Professor*
**Joel Barber,** *Assistant Professor*
**Chun-Hao Chang,** *Assistant Professor*
**Robert T. Dalgler,** *Associate Professor*
**Krishnan Dandapani,** *Assistant Professor*
**Karen Duhala,** *Assistant Professor*
**Shahid Hamid,** *Assistant Professor*
**James Keys,** *Instructor*
**Simon Pak,** *Associate Professor*
**Ali Parhizgari,** *Professor and Director, MBA Program*
**Emmanuel Roussakis,** *Professor*
**George B. Simmons,** *Distinguished Service Professor*
**Michael Sullivan,** *Assistant Professor*
**William Welch,** *Associate Professor and Associate Director, Center for Banking and Financial Institutions*
**John S. Zdanowicz,** *Professor and Director, Center for Banking and Financial Institutions*

The Department of Finance offers an undergraduate major in Finance, and a Master of Science in Finance (M.S.F.).

### Undergraduate Finance Major

The Finance program leading to the BBA degree is designed to give the undergraduate student managerial finance skills in the areas of banking, corporate finance, investments, and financial markets. The program consists of:

1. 36 semester hours of general business core courses.

2. 12 semester hours of finance core courses:

| | |
|---|---|
| FIN 3414 | Intermediate Finance |
| FIN 4303 | Financial Markets and Institutions |
| FIN 4324 | Commercial Bank Management |
| FIN 4502 | Security Analysis |

3. Nine semester hours of finance electives selected from any 4000 or 5000 level FIN prefixed courses.

4. A three semester hour free elective course. (International Business double majors are required to complete FIN 4604 International Finance, MAN 4600 International Management, and two additional 4000 and 5000 level International Business courses).

## Management and International Business

**Dana L. Farrow,** *Professor and Chairperson*
**Richard Ahlers,** *Instructor*
**Constance S. Bates,** *Associate Professor*
**Leonard H. Chusmir,** *Associate Professor*
**Gary Dessler,** *Professor*
**Herman Dorsett,** *Associate Professor*
**Earnest Friday,** *Assistant Professor*
**Ronald Gilbert,** *Associate Professor*
**Jerry Haar,** *Associate Professor*
**Richard M. Hodgetts,** *Professor*
**William T. Jerome,** *Distinguished University Professor*
**Willabeth Jordan,** *Instructor*
**K. Galen Kroeck,** *Associate Professor and Director, Doctoral Studies*
**Jan B. Luytjes,** *Professor*
**Karl O. Magnusen,** *Associate Professor*
**Modesto A. Maidique,** *Professor and University President*
**Sherry Moss,** *Assistant Professor*
**Eleanor Polster,** *Instructor*
**Kannan Ramaswamy,** *Assistant Professor*
**William E. Renforth,** *Professor*
**Leonardo Rodriguez,** *Professor and Vice President, Business and Finance*
**Ronnie Silverblatt,** *Associate Professor*
**Christine Specter,** *Assistant Professor*
**George Sutija,** *Associate Professor*
**William M. Taggart,** *Professor*
**Anisya S. Thomas,** *Assistant Professor*
**Enzo Valenzi,** *Professor*

The Department of Management and International Business offers programs of study at the Bachelor's level in General Management, Personnel Management, and International Business.

### General Management and Personnel Management Majors

The student is given wide latitude either to specialize in one particular area, or to select from courses on a more general level of professional education. The curriculum is designed to allow students to prepare for employment in business or other profit organizations. The emphasis is on developing immediately applicable skills in management within a broader framework of general concepts and theory. Flexibility is allowed and students are permitted to take up to 12 hours of electives in other fields, particularly in economics, mathematics, and psychology in 3000- and 4000-level courses not a part of the College's pre-core. Electives in fields other than these must have the prior approval of the Department Chairperson. The Management major requires 12 semester hours of courses listed with the Department at the 4000 level. *Note that not all courses with an MAN prefix are Management courses.*

### Major courses for Management students in specific subject areas

**Personnel Management Major:**
(Select 4 of 6)

| | |
|---|---|
| MAN 4401 | Collective Bargaining |
| MAN 4410 | Union-Management Relations |
| MAN 4301 | Personnel Management |

| | |
|---|---|
| MAN 4320 | Personnel Recruitment and Selection |
| MAN 4322 | Personnel Information Systems |
| MAN 4330 | Wage and Salary Administration. |

**General Management Major**

| | |
|---|---|
| MAN 4142 | Managerial Decision Styles |

and any three other Management or Personnel Management courses listed with the Management and International Business Department. (Students are urged to confer with their academic counselor regarding eligible courses. *Not all courses with an MAN prefix are Management courses).*

*Note*: Elective courses outside the CBA must be taken in the Departments of Economics, Mathematical Sciences, or Psychology. Exceptions may be permitted only with the approval of the Department Chairperson. Elective courses taken in other departments must be taken for letter grade only.

## International Business Major

The Department of Management and International Business offers a second undergraduate major in International Business to students with other majors in the College of Business Administration.

The objective of the undergraduate International Business major is to provide eligible students with an intensive, in-depth study of the international dimension of business operations. Students are required to take the following courses, in addition to the program for the functional major:

1. MAN 4600 International Management

2. Three of the following courses:

| | |
|---|---|
| FIN 4604 | International Financial Management (required for Finance IB majors) |
| MAN 4671 | Special Topics in International Business |
| MAN 4690 | Independent Study In International Business |
| MAR 4156 | International Marketing (required for Marketing IB majors) |
| MKA 4244 | Export Marketing |
| ECO 4701 | World Economy |
| ECO 4733 | Multinational Corporations |

## Marketing and Environment

**Barnett A. Greenberg,** *Professor and Chairperson*
**Frank Carmone,** *Business Men's Insurance Professor of Marketing*
**Lucette Comer,** *Assistant Professor*
**Anne Fiedler,** *Instructor and Assistant Dean*
**Dennis J. Gayle,** *Associate Professor*
**Jonathan N. Goodrich,** *Associate Professor*
**Robert Hogner,** *Associate Professor*
**Carl Kranendonk,** *Instructor*
**Henry A. Laskey,** *Assistant Professor*
**Donghoon Lee,** *Assistant Professor*
**Alma Mintu,** *Assistant Professor*
**J.A.F. Nicholls,** *Associate Professor*
**Marta Ortiz,** *Associate Professor*
**Lynda Raheem,** *Instructor*
**Sydney Roslow,** *Professor Emeritus*
**Bruce Seaton,** *Associate Professor*
**Philip Shepherd,** *Associate Professor*
**Richard R. Still,** *Professor*
**John Tsalikis,** *Assistant Professor*
**Arturo Vasquez,** *Assistant Professor*

## Undergraduate Marketing Major

The Marketing Major requires 15 semester hours of senior (4000) level marketing course work, of which the following nine hours are required:

| | |
|---|---|
| MAR 4503 | Consumer Behavior |
| MAR 4613 | Marketing Research |
| MAR 4803 | Cases in Marketing Management |

The remaining six hours are selected by the student with his or her advisor from other Marketing course offerings. It is suggested that students concentrate in a specific area and take, for example:

**1. Advertising Concentration**

| | |
|---|---|
| MAR 4323 | Advertising Management |
| MAR 4334 | Advertising Campaign Management |

**2. Sales Concentration**

| | |
|---|---|
| MAR 4403 | Sales Management |
| MKA 4021 | Personal Selling |

**3. Retailing Concentration**

| | |
|---|---|
| MAR 4231 | Retailing Management |
| MAR 4232 | Cases in Retailing Management |

**4. International Concentration**

| | |
|---|---|
| MAR 4156 | International Marketing |
| MKA 4244 | Export Marketing |

**5. Distribution Concentration**

| | |
|---|---|
| MAR 4203 | Marketing Channels |
| MAR 4213 | Transportation Logistics |

Marketing majors, however, may choose courses from any other undergraduate marketing offerings or any mix of courses.

**Approved Electives**

Marketing majors may select any 4000-level business course as an elective. With the prior approval of the Counseling Office, certain non-business courses also may be used as electives (depending upon their relevance to the student's academic program and career objectives).

## Certificate Programs

### General Information

The overall purpose of the Certificate Programs is to provide practicing managers with advanced training in the techniques and methods pertinent to their areas. The programs are for both degree and non-degree seeking students, and are available in the areas of Banking, Insurance, International Bank Management, International Business, Savings and Loan, and Marketing. A Certificate is awarded upon successful completion of each program.

Students seeking to enroll in the undergraduate Insurance, or Marketing Certificate Programs must meet upper division College of Business Administration admission requirements. Students wishing to enter the Banking, International Bank Management, International Business, or Savings and Loan Certificate Programs must meet all prerequisites for courses in those respective programs. Please contact the Business Counseling Office at 348-2781 for application details. In all cases, students must apply to, and be accepted into the various Certificate Programs. Upon successful completion of the appropriate course work, and upon application by the student to the appropriate department, a Certificate of Completion will be awarded.

### Banking Certificate

The CIB (Certificate in Banking) is designed for practicing bank managers and bank employees. The core program consists of four undergraduate or graduate Finance courses. Upon successful completion of the four course sequence, a Certificate signed by the Dean of the College of Business Administration will be awarded.

Participants in the CIB Program must meet certain admission require-

ments. In general, those intending to take undergraduate level courses must have an Associate in Arts Degree or its equivalent, and must meet the other lower division preparation requirements of the College. Participants planning to take graduate level courses must hold a Bachelor's degree, submit a satisfactory score on the Graduate Management Admissions Test, provide transcripts of all undergraduate work, and meet all admission requirements of the College's graduate programs.

### Program Requirements

| | | |
|---|---|---|
| FIN 3414 | Intermediate Finance | 3 |
| | or | |
| FIN 6426 | Financial Management Policies | |
| FIN 4303 | Financial Markets and Institutions | 3 |
| | or | |
| FIN 6246 | Financial Markets and Institutions | |
| FIN 4324 | Commercial Bank Management | 3 |
| | or | |
| FIN 6315 | Commercial Banking | |
| FIN 4345 | Credit Analysis and Loan Evaluation | 3 |
| | or | |
| FIN 6346 | Credit Analysis | |

Applicants who are interested in pursuing a Master's degree in Finance should take FIN 6426, FIN 6246, FIN 6315, and FIN 6346 rather than FIN 3414, FIN 4303, FIN 4324, and FIN 4345.

## International Bank Management Certificate

The Certificate in International Bank Management (CIBM) is designed to train existing and future bankers in the areas of international banking policy, practice, and technique. Its interest is to provide an interface between the domestic and international side of banking for bank managers. This certificate is not open to finance majors.

Participants in the CIBM must meet the admission requirements listed for the Certificate in Banking Program.

### Required Courses

| | | |
|---|---|---|
| FIN 3414 | Intermediate Finance | 3 |
| | or | |
| FIN 6426 | Financial Management Policies | |
| FIN 4324 | Commercial Bank Management | 3 |
| | or | |
| FIN 6315 | Commercial Banking | |
| | or | |
| FIN 6325 | Current Issues in Commercial Banking | |
| | or | |
| FIN 4345 | Credit Analysis and Loan Evaluation | |
| | or | |
| FIN 6345 | Credit Analysis | |
| FIN 4604 | International Financial Management | 3 |
| | or | |
| FIN 6636 | International Finance | |
| FIN 4615 | International Banking | 3 |
| | or | |
| FIN 6625 | International Bank Management | |

Applicants with a Bachelor's Degree who are interested in pursuing a Master's degree in Finance should take FIN 6426, FIN 6636, FIN 6625, and either FIN 6315, FIN 6325, or FIN 6345 rather than FIN 3414, FIN 4324 or FIN 4345, FIN 4604, FIN 4615.

## Marketing Certificate

Students enrolling in the Marketing Certificate must be admitted to an upper division University program. This certificate is not open to Marketing majors.

The program is comprised of six three-credit hour undergraduate marketing courses, one introductory course at the junior (3000) level, the prerequisite for all the other courses in the program, and five at the senior (4000) level.

### Required Courses

| | | |
|---|---|---|
| MAR 3023 | Marketing Management | 3 |
| MAR 4231 | Retailing Management I | 3 |
| MAR 4323 | Advertising Management | 3 |

For electives, students take three courses from the following marketing classes and other selected courses:

| | |
|---|---|
| MAN 3701 | Business and Society |
| MAR 4232 | Cases in Retailing Management |
| MAR 4803 | Cases in Marketing Management |
| MAR 4156 | International Marketing |
| MKA 4244 | Export Marketing |
| MAR 4503 | Consumer Behavior |
| MAR 4613 | Marketing Research |
| MAR 4334 | Advertising Campaign Management |
| MKA 4021 | Personal Selling |
| MAR 4203 | Marketing Channels |
| MAR 4403 | Sales Management |
| MAR 4025 | Marketing of Small Business Enterprises |

On satisfactory completion of the program, signified by a grade of 'C' or higher in each course, students will, on application, receive a Certificate in Marketing signed by the Department Chairperson and the Dean of the College.

## Non-Credit Certificate Programs

While based in academic theory and models, these programs use hands-on techniques and applications that professional adults find useful. Certificate and C.E.U.'s may be earned.

### Training and Human Resource Development

This two-semester program is the most comprehensive non-credit certificate program in the United States. Recognized by the American Society for Training and Development, the program is showcased in the March 1989 Training and Development Journal. The certificate sets a professional education standard for South Florida trainers.

### Personnel Administration

An 11 week program offered twice a year. Sessions cover current legal issues affecting the human resource professional and the functions of personnel administration.

## Course Descriptions

### Definition of Prefixes:

ACG-Accounting; BAN-Banking; BUL-Business Law; CIS-Computer and Information Systems; GEB-General Business; FIN-Finance; MAN-Management; MAR-Marketing; QMB-Quantitative Methods in Business; REE-Real Estate; RMI-Risk Management and Insurance; TAX-Taxation.

### Departmental or School/College Designation:

**AC** - Course taught by School of Accounting

**BA** - Interdepartmental course taught by College of Business Administration

**DS** - Course taught by Department of Decision Sciences and Information Systems

**EC** - Course taught by Department of Economics, College of Arts and Sciences

**FI** - Course taught by Department of Finance

**MA** - Course taught by Department of Management and International Business

**ME** - Course taught by Department of Marketing and Environment

**MS** - Course taught by Department of Mathematical Sciences, College of Arts and Sciences

**ACG 3021 Accounting for Decisions (AC) (3).** Accounting concepts and analyses essential to determining the income and financial position of a business enterprise. Prerequisites: ECO 3021, ECO 3011, STA 3132, or equivalent and sophomore standing.

**ACG 3024 Accounting for Managers and Investors (AC) (3).** Introduction to the principles used in measuring organization activities. For non-business majors only.

**ACG 3301 Accounting for Planning and Control (AC) (3).** Use of accounting concepts, analyses, and financial data to aid in the evaluation of the business enterprise; and to aid management in its planning, organizing, and controlling functions. Prerequisites: At least six semester hours of introductory financial and managerial accounting with grades of 'C' or higher, or ACG 3021 with a grade of 'C' or higher, and successful completion of a readiness examination. Ability to work with spreadsheet. Must be taken within the first 30 hours of upper division work.

**ACG 4101 Financial Accounting I (AC) (3).** Underlying concepts and ethical, regulatory and business environment of financial reporting with emphasis on measurement, analysis and interpretation of income, cash flows and financial position. Prerequisites: Calculus I and Logic with grades of 'C' or higher, successful completion of a readiness examination, and a junior standing.

**ACG 4111 Financial Accounting II (AC) (3).** Underlying concepts and ethical, regulatory, and business environment of financial reporting with emphasis on measurement, analysis and interpretation of financial position. Prerequisite: ACG 4101 with grade of 'C' or higher.

**ACG 4251 International Accounting (AC, MA) (3).** Comparative analysis of accounting concepts and practices in different countries; international accounting standards; problems of accounting for multinational corporations, including transfers of funds and income measurement; and the role of accounting in national economic development. Prerequisites: CGS 2060 or equivalent. ACG 3301 with a grade of 'C' or higher.

**ACG 4341 Management Accounting (AC) (3).** Determination and control of production costs, job order and process systems; actual and standard costs; budgetary control and other methods of performance measurement and analysis; ethics of management accounting. Prerequisites: ACG 4101 with a grade of 'C' or higher.

**ACG 4401 Accounting Information Systems (AC) (3).** Use of computers in accounting systems, emphasizing "hands-on" use of operating system, word processing, spreadsheet, data base management, communications and other software in accounting. Prerequisites: CGS 2060 or equivalent.

**ACG 4651 Auditing (AC) (3).** Standards and procedures of auditing financial information, ethics and responsibilities of auditors, collection and documentation of audit evidence, reporting and international auditing standards. Prerequisite: ACG 4111 with a grade of 'C' or higher.

**ACG 4692 Accounting Information Presentation (AC) (3).** Seminar in the development and presentation of oral and written information as required by authoritative standards and pronouncements in accounting and auditing. Prerequisites: ACG 4651 and ACG 4341 with grades of 'C' or higher.

**ACG 4821 Accounting and Social Responsibility (AC) (3).** Ethical and social responsibilities of accountants with emphasis on professional ethics in corporate, government and public accounting structure and practices and their effects on employees, environment and community. Prerequisites: ACG 4341 ACG 4651 with grades of 'C' or higher.

**ACG 4901 Independent Study in Accounting (AC) (1-3).** Individual conferences, supervised readings, and reports on personal investigations.

**ACG 4931 Special Topics in Accounting (AC) (1-3).** For groups of students who wish an intensive study of a particular topic or a limited number of topics not otherwise offered in the curriculum. Prerequisite: Permission of the Director of the School of Accounting.

**BUL 3100 The Legal Environment of Business (AC) (3).** The course includes issues such as: Contracts, Torts, Legal/Political/Economic aspects of Ethics and the Law, U.C.C,, Antitrust Law, Employment Law, Administrative Law, Securities Law, and International Business Law topics.

**BUL 4111 Business Law I (AC) (3).** Substantive issues and principles of business law, including: the American legal system, torts, contracts, Uniform Commercial Code sales, property law, credit and secured transactions, and ethical issues in business law.

**BUL 4650 Special Topics in Business Law (AC) (1-6).** Intensive study for groups of students of a particular topic, or a limited number of topics, not otherwise offered in the curriculum. Prerequisite: Permission of the Director of the School of Accounting.

**BUL 4905 Independent Study in Business Law (AC) (1-6).** Individual conferences; supervised readings; reports on personal investigations. Prerequisite: Permission of the Director of the School of Accounting

**CGS 3300 Introduction to Information Systems (DS) (3).** Survey major information systems (I.S.) problems in organizations. Brief study of basic computer concepts; I.S. development cycle; relation of I.S. and decision-making; microcomputer database, spreadsheet and wordprocessing business applications. Prerequisite: CGS 2060.

**ECO 3011 Economics, Man and Society Macro (EC) (3).** Relationship of economics to aggregate income. Identification of economic and non-economic objectives and problems. Analysis of economic behavior of individuals, business firms, public agencies, and interest groups. Public issue interpretation in the light of economic theory.

**ECO 3021 Economics, Man and Society Micro (EC) (3).** Relationship of economics to individual action. Identification of economic and non-economic objectives and problems. Analysis of economic behavior of individuals, business firms, public agencies, and interest groups.

**ECO 3431 Applied Macroeconomics (EC) (3).** Aggregate economic performance and business conditions analysis. Analysis of the nature and causes of business fluctuation. Economic expansions and stagflation: public policies for economic stability; fiscal policy, monetary policy and incomes policy. Sectorial analysis and macroeconomic forecasting. Prerequisites: ECO 3021 and ECO 3011 or equivalent.

**FIN 3403 Financial Management (FI) (3).** A study of financial decision making in the corporate form of enterprise. An analysis of the sources and uses of funds. Emphasis is placed on working capital management; capital budgeting techniques; short and long term financing; and capital structure and the value of the firm. Prerequisite: ACG 3021 and STA 3132 or equivalent.

**FIN 3414 Intermediate Finance (FI) (3).** Special topics and case problems in financial management. Prerequisite: FIN 3403 or equivalent.

**FIN 3949 Cooperative Education in Finance (FI) (3).** Semesters of full-time classroom study are alternated with semesters of full-time remunerated em-

ployment which closely relates to the student's area of academic study. Carefully designed and monitored work assignments are intended to develop the student's understanding of the relationship between theory and practice in an authentic work environment. Prerequisite: Approval of Chairperson.

**FIN 4100 Estate Analysis and Planning (FI) (3).** A personal financial management approach to estate creation, maintenance, and transfer. Uses financial analysis techniques and portfolio approaches to evaluate alternate strategies. Prerequisite: FIN 3403 or equivalent.

**FIN 4204 Financial History of the United States (FI) (3).** Origins of the American financial system. Early American history of financial intermediaries. Evolution in financial legislation, policy, practice, and role of financial intermediaries. Role of the Federal Reserve System in financial markets and influence on financial policy. Prerequisite: FIN 3403 or equivalent.

**FIN 4303 Financial Markets and Institutions (FI) (3).** Financial markets and the role of financial intermediaries in these markets. Emphasis will be upon the objectives and policies of financial intermediaries within the constraints of law and regulatory authorities. Prerequisite: FIN 3403 or equivalent.

**FIN 4324 Commercial Bank Management (FI) (3).** The management of bank assets and liabilities; specialized banking functions; and the role of the commercial bank in financing business. Prerequisite: FIN 3403 or equivalent.

**FIN 4345 Credit Analysis and Loan Evaluation (FI) (3).** Topics to include: introduction to commercial lending; secured lending; accounts receivable financing and factoring; inventory financing; introduction to lending vehicles; short term lending; domestic taxation; consolidations; forecasting and intermediate term cash flow lending; term loan agreements/covenants; subordinations and guarantees; foreign exchange; international transactions and leasing. Prerequisite: FIN 3403.

**FIN 4404 Policies for Financial Management (FI) (3).** The process of securing and allocating funds within the organization, with emphasis on the relevant financial decision-making and policy aspects. Prerequisite: FIN 3403 or equivalent.

**FIN 4435 Capital Budgeting Techniques and Applications (FI) (3).** The application of contemporary theory and techniques to the problem of long term resource allocation. A review of capital budgeting techniques and the implications the investment and management of capital have toward the goal of maximizing the value of the firm. Prerequisite: FIN 3414 or equivalent.

**FIN 4461 Financial Statement Analysis (FI) (3).** This course explores methods of deriving information from financial statements, including both published documents and privately prepared reports, that would be of interest to lenders and investors. Extensive use is made of computer assisted financial planning forecasting models. Prerequisite: FIN 3403.

**FIN 4486 Financial Risk Management-Financial Engineering (3).** A survey of financial instruments used for financial risk management, including forwards, futures, options and swaps. Emphasis is on identification of financial risks and designing optimal risk management program. Prerequisites: FIN 4303 or permission of instructor.

**FIN 4502 Securities Analysis (FI) (3).** The examination of the determinants of the values of common and preferred stocks, bonds, and warrants. The timing of security purchases and sales and an introduction to portfolio construction techniques. Prerequisite: FIN 3414 and QMB 3150.

**FIN 4503 Futures Markets (FI) (3).** This course covers the institutional, speculative, and hedging concepts associated with futures markets. Individual and institutional uses of these markets are examined, with the emphasis on the risk-return aspects of the futures and cash markets. Prerequisites: FIN 3414 or FIN 4502 or FIN 4303.

**FIN 4504 Portfolio Analysis and Management (FI) (3).** Financial theories will be applied to the construction of portfolios. Portfolio management techniques will be analyzed in regard to the goals of individuals, corporations, and various financial institutions. Prerequisite: FIN 4502 or equivalent.

**FIN 4515 Options Markets (FI) (3).** An examination of the risk-return structure of options on stocks, indexes, debt, and futures. An examination of the structure of these markets and strategies for their use in portfolios. Prerequisite: FIN 4502.

**FIN 4604 International Financial Management (FI,MA) (3).** Capital budgeting operational analysis and financial decisions in the multinational context. Working capital management and intrafirm fund transfers. Measurement and evaluation of the risk of internationally diversified assets. Prerequisite: FIN 3403 or equivalent.

**FIN 4613 International Trade Financing Techniques (FI, MA) (3).** Alternative methods of financing exports and associated risks. Flexibility and adaptability of letters of credit to special transactions. Types of financial arrangements available to importers and bank considerations in the extension of credit. Role and importance of governmental and quasi-governmental organizations such as the Export-Import Bank, Foreign Credit Insurance Association (FCIA), Overseas Private Investment Corporation (OPIC), and Private Export Funding Corporation (PEFCO). Prerequisite: FIN 3403.

**FIN 4614 International Capital Markets (FI,MA) (3).** The world's major non-U.S. stock exchanges; international diversification and the international capital asset pricing model; foreign exchange markets and Euro-currency markets. Prerequisite: One of the following courses: FIN 4303, FIN 4502, FIN 4503, or FIN 4604.

**FIN 4615 International Banking (FI) (3).** Introductory survey of issues that deal with international aspects of banking. The course provides an overview of the structure and operation of the international banking function, the services offered, supporting documentation, and measures to improve the efficiency and effectiveness of the international banking organization. The purpose of the course is to acquaint the students with the daily activities in international banking. Prerequisite: FIN 4324 or permission of instructor.

**FIN 4621 Risk Analysis in International Lending (FI, MA) (3).** Analyzing foreign loan requests and evaluating risk. Measuring and managing country exposure. Role of regulatory authorities in promoting diversification of international credits. Maximizing long-run profitability to the international loan portfolio taking funding options into consideration. Prerequisite: One of the following - FIN 4303, FIN 4502, FIN 4503, or FIN 4604.

**FIN 4713 Financial Policies for Not-For-Profit Organizations (FI) (3).** Financial processes relevant to governmental and other not-for-profit organizations. Emphasis is on legal, political, and market constraints on securing, managing, and expending funds. Prerequisite: FIN 3403 or equivalent.

**FIN 4904 Independent Study in Finance (FI) (1-6).** Individual conferences,

supervised readings, reports on personal investigations. Consent of faculty tutor and Department Chairperson required.

**FIN 4934 Special Topics in Finance (FI) (1-3).** For groups of students who desire an intensive study of a particular topic or a limited number of topics not otherwise offered in the curriculum. Consent of faculty supervisor and Department Chairperson required.

**FIN 4941 Finance Internship (FI) (1-3).** Full-time supervised work in a selected bank or other organization in the area of finance. Prerequisites: At least 12 hours of finance, consent of instructor, and department chairperson.

**FIN 4949 Cooperative Education in Finance (FI) (3).** Semesters of full-time classroom study are alternated with semesters of full-time remunerated employment which closely relates to the student's area of academic study. Carefully designed and monitored work assignments are intended to develop the student's understanding of the relationship between theory and practice in an authentic work environment. Prerequisite: Approval of Chairperson.

**GEB 2011 Introduction to Business (MA) (3).** Introduction to the business world, including the functions of business and management. Examination of the free enterprise system, forms of business ownership and the role of business in society.

**GEB 3112 Entrepreneurship and Organization (MA) (3).** An introduction to the general theories, principles, concepts and practices of entrepreneurship. Heavy emphasis is placed on lecture, readings, case studies and group projects.

**ISM 3949 Cooperative Education in Management Information Systems I (DS) (1-3).** A program enabling MIS majors to work in jobs significantly related to their major area and career goals. Placement must be approved by instructor.

**ISM 4113 Systems Analysis and Design (DS) (3).** Topics include: information systems concepts; the structure, design, and development of the data base; and techniques and procedures used in the analysis and design of systems projects. Prerequisite: ISM 4210.

**ISM 4151 Systems Management (DS) (3).** An in-depth, case-oriented, study of the problems encountered in the management of systems projects. Analyst-user conflicts, communication problems within the systems department, computer evaluation and selection techniques, computer negotiations and contracts, and project management are covered in detail. Where appropriate, field study investigating a topical area will be carried out by each student. Prerequisite: ISM 4113.

**ISM 4210 Data Base Applications (DS) (3).** Application of the data base technology and concepts to organization problems. Includes DBMS components; hierarchic, network and relational approaches to DBMS design. Hands on experience with a DBMS. Prerequisite: CGS 3300.

**ISM 4340 Organizational Impacts of Information Systems (DS) (3).** Investigation of the human and organizational factors relevant to design and implementation of information systems in complex organizations. Prerequisites: MAN 3025 and CGS 3300.

**ISM 4949 Cooperative Education in Management Information Systems II (DS) (1-3).** A continuation of ISM 3949. A program enabling MIS majors to work in jobs significantly related to their major area and career goals. Placement must be approved by instructor. Prerequisite: ISM 3949.

**MAN 3025 Organization and Management (MA) (3).** An analysis of organizations and the management processes of planning, organizing, directing, and controlling in the context of socio-technical systems. Individual, group, intergroup, and organizational responses to various environments and technologies are studied, as are pertinent techniques of manpower management.

**MAN 3503 Managerial Decision Making (DS) (3).** This course concentrates on practical decision problems for the manager in an organization. Topics include decision-making theory, linear programming and extensions, Markov Chains, queuing, simulation, and decision support systems. Use of computer packages. Prerequisites: College Algebra, STA 3132 or the equivalent, and QMB 3150.

**MAN 3602 International Business (MA) (3).** Introductory analysis of the business system and management decision-making in the international operation of enterprise. Special emphasis given to international trade and investment; foreign exchange; financial markets; political and cultural interactions between host societies and multinational enterprise. Prerequisite: ECO 3432.

**MAN 3701 Business and Society (ME) (3).** An examination of place and role of business in contemporary society. The interaction between business and its economic, legal, political, social, and international environments is discussed and analyzed in detail. Among topics which may be covered are the development and current structure of social systems, as itemized above, which set forth the parameters in which business operates. That is, government legislation and regulation, constitutional law, political and cultural limitations, and other topics.

**MAN 3949 Cooperative Education Management I (MA) (1-3).** A special program enabling management majors to work in jobs significantly related to their major area and career goals. Specific placement must be approved by the Department Chairperson and faculty advisor prior to enrollment. Prerequisite: qualification for Cooperative Education Program.

**MAN 4064 Dilemmas of Responsibility in Business Management (MA) (3).** The use of interdisciplinary concepts and tools to define and understand the moral and ethical dilemmas involved in business and corporate spheres of activity. Specifically attended to are issues such as pollution, consumer affairs, and quality of public facilities.

**MAN 4065 Ethical Systems Management (ME) (3).** The application of ethical theory to business management. A review of ethical systems, and examples, theoretical and practical of institutionalizing ethics in organizations. Case analyses used, and written projects required. Prerequisites: MAN 3701 or permission of instructor.

**MAN 4102 Women and Men in Management (MA) (3).** Examines the beliefs, values and behaviors of working women and men with whom they interact; gender differences in socialization, expectations, stress, stereotyping, power, balancing of work and private life.

**MAN 4120 Intergroup Relations in Organization (MA) (3).** A study of the psychological and sociological dimensions of intergroup relations. Attention to the problems experienced by subgroups in large and small organizations, with particular reference to ethnic, racial, and sub-cultural groups. The roles and responsibilities of management in the constructive resolution and utilization of inter-group conflict in organizations.

**MAN 4142 Managerial Decision Styles (MA) (3).** An experiential, theoretical, and applied investigation of personal decision styles and their relation to management and human effectiveness. Focus upon analytic and intuitive styles of thinking.

**MAN 4151 Behavioral Science in Management (MA) (3).** An analysis of selected concepts in behavioral science, their interaction and application to management. Topics include perception, motivation, and group behavior.

**MAN 4201 Organization Theory (MA) (3).** A comparative analysis of various theories of organization (including the classical, biological, economic, and Cyert-March models); and of their treatment of fundamental structure; conflict communications; group and individual behavior; and decision-making. Primary emphasis on developing an integrated philosophy of organization and management. Prerequisite: MAN 3025 or equivalent.

**MAN 4301 Personnel Management (MA) (3).** Attention is focused on the theory and practice of modern personnel management as related to other management functions. Topics include: selection; training; job and performance evaluation; and incentive schemes. Special attention is given to human resource management and development at various organizational levels.

**MAN 4320 Personnel Recruitment and Selection (MA) (3).** In-depth study of the personnel staffing function. Includes an analysis of objectives, techniques, and procedures for forecasting manpower needs, recruiting candidates, and selecting employees.

**MAN 4322 Personnel Information Systems (MA) (3).** A survey of personnel reporting requirements; assessment of information needs; manpower planning; and development of integrated personnel systems. Prerequisites: CGS 3300 and MAN 4301.

**MAN 4330 Wage and Salary Administration (MA) (3).** Presents the theories and techniques used by management in the areas of work measurement, wage incentives, and job evaluation.

**MAN 4401 Collective Bargaining (MA) (3).** Introduction to labor/management relationships in the United States. Attention to the development of unionism as an American institution, government regulations, and collective bargaining in private and public sectors. A negotiation simulation generally is integrated with classroom work.

**MAN 4410 Union-Management Relations (MA) (3).** Examination of current issues and problems facing unions and management, with emphasis on unfair labor practices, contract administration, and arbitration. Students should complete MAN 4401 before taking this course.

**MAN 4504 Operations Management (DS) (3).** Concepts in design, analysis, and control of operating systems. Facility location and layout, work standards, maintenance, quality control, MRP, planning and scheduling applied to production and service systems. Prerequisite: QMB 3150.

**MAN 4523 Production Information Systems (DS) (3).** A study of the special problems associated with the development of information systems capable of supporting the production function of an organization. Review of information systems approaches to inventory control and work processing management. Prerequisites: CGS 3300 and MAN 4504, or consent of instructor.

**MAN 4584 Productivity Management (DS) (3).** Method and cases to measure, evaluate, plan and improve productivity in business and service organizations. Prerequisite: Senior standing in the College.

**MAN 4600 International Management (MA) (3).** Introductory survey of management issues that confront the multinational enterprise. At least one class session is devoted to each of the following topics: review of basic trade theory; tariffs and trade barriers; organizational transfer, foreign exchange; institutions affecting the multinational manager (such as IMF, IDB, Ex-in Bank, EEC, IBRD), international financial management issues in multinational accounting; personnel management, comparative business customs and behavioral issues; import-export procedures; conflicts with national interests. Prerequisite: MAN 3602.

**MAN 4610 International and Comparative Industrial Relations (MA) (3).** Examines selected industrial relations systems of Western Europe, Asia and the Americas, with special emphasis on differences among systems and the reasons such differences exist. The industrial relations significance of the multinational enterprise and management problems associated with operations in diverse systems are analyzed.

**MAN 4613 International Risk Assessment (MA) (3).** Introduces the types of risk confronting businesses operating internationally. Critiques specific techniques used to assess risk and relates the results to management decision making. Prerequisite: MAN 3602.

**MAN 4629 International Business Internship (MA) (3).** Supervised work in a selected organization in the area of international business. Prerequisite: Consent of instructor, department chairperson, MAN 3602, and MAN 4600.

**MAN 4633 Strategic Management in the MNC (MA) (3).** Study of the concept and process of MNC strategy. Involves considering the competitive and political structure of the global market, logic of the multinational enterprise, and nature of organizations. Prerequisite: MAN 3602.

**MAN 4671 Special Topics in International Business (MA) (3).** For groups of students who wish to study intensively a particular topic, or a limited number of topics, in international business, not offered elsewhere in the curriculum. Prerequisites: Approval of the faculty advisor, Director, and Dean.

**MAN 4690 Independent Study in International Business (MA) (3).** Individual conferences; supervised readings; reports on personal investigations. Prerequisites: Assignment of faculty tutor and written permission of Director and Dean.

**MAN 4711 Social Responsibility and Social Accounting (ME) (3).** The sources of the conception of corporate social responsibility. An examination of the classical doctrines as well as new approaches to the conception of the corporation as a citizen. A portion of the course will be devoted to a discussion of social accountability and social accounting as a specific problem in corporate input. Prerequisite: MAN 3701 or consent of Instructor.

**MAN 4722 Policy Analysis (MA) (3).** The use of cases, guest lecturers, and gaming to integrate analysis and measurement tools, functional areas, and public policy issues. The objective is to develop skill in broad areas of rational decision-making in an administrative context of uncertainty. Prerequisite: Completion of all core requirements. Must be taken in last academic semester of senior year.

**MAN 4731 Modern Business History (ME) (3).** An examination of the history of the corporation in the United States since the Civil War, up to, and including, the development of the multinational corporation. An examination of the social and economic forces operative in the development of the corporate form. A full exploration of the current power of the

corporate form and legal and other, efforts to limit this power. Prerequisite: MAN 3701 or consent of the Instructor.

**MAN 4741 Business Environment and Policy Formation (ME) (3).** A course studying the conceptual and environmental forces which establish the framework of business strategy and tactical decision. A critical analysis of conceptual processes which can limit the executive's capacity to respond to change in the total and in the business environment. Prerequisite: MAN 3701 or consent of Instructor.

**MAN 4742 Business and the Environment (ME) (3).** A course on the effect of industrialization and technological change on the physical environment. An examination of the current legal, economic and political consequences of pollution and environmental damage, and the abatement of these factors. Prerequisite: MAN 3701 or consent of Instructor.

**MAN 4802 Small Business Management (MA) (3).** The organization and operation of the small business: accounting, finance, production, and marketing subsystems. The use of analytical approach. Problems of manpower management and information flow. Possible use of EDP, case studies.

**MAN 4905 Independent Study in Management (MA) (1-6).** Individual conferences; supervised readings; reports on personal investigations. Consent of faculty tutor, Department Chairperson and Dean required. P/F only.

**MAN 4930 Special Topics in Management (MA) (1-6).** For students who wish an intensive study of a particular topic or a limited number of topics not otherwise offered in the curriculum. Consent of faculty supervisor, Department Chairperson, and Dean required. Grading option.

**MAN 4949 Cooperative Education-Management II (MA) (1-3).** Continuation of MAN 3949. Prerequisites: MAN 3949 and qualification for Cooperative Education Program.

**MAR 3023 Marketing Management (ME) (3).** A descriptive study emphasizing the functions and institutions common to marketing systems. Prerequisite: Junior standing or permission of department.

**MAR 4025 Marketing of Small Business Enterprises (ME) (3).** Designed to develop an understanding of the principles and practices which contribute to the successful marketing operation of a small business enterprise, this course deals with marketing policies, techniques, and applications to aid the entrepreneur in this field. Prerequisite: MAR 3023.

**MAR 4071 Current Issues in Marketing I (ME) (3).** Intensive study of various topic areas in marketing. Course emphasizes student reading and research, with oral and written reports. Students electing to take this seminar may take no more than 3 credit hours of independent study in marketing. Prerequisite: MAR 3023.

**MAR 4072 Current Issues in Marketing II (ME) (3).** Students electing to take this seminar may not take independent study in marketing. Prerequisite: MAR 4071.

**MAR 4156 International Marketing (ME, MA) (3).** The course studies the information required by marketing managers to assist in satisfying the needs of consumers internationally. Special emphasis will be given to the constraints of the international environment. Prerequisite: MAR 3023.

**MAR 4203 Marketing Channels (ME) (3).** The course focuses upon institutions, functions, and flows within channels of distribution; and their integration into channels systems. Wholesaling and physical activity are emphasized. Prerequisite: MAR 3023.

**MAR 4231 Retailing Management (ME) (3).** An examination of the role of retailing in the marketing system. Attention is concentrated on fundamentals for successful retail management. The course emphasizes basic marketing principles and procedures, including merchandising; markup-markdown; pricing; stock-turn; and sales and stock planning. Prerequisite: MAR 3023.

**MAR 4232 Cases in Retailing Management (ME) (3).** This course treats the retail marketing concentration in terms of up-to-date merchandise management methods. Emphasis is on elements of profit, open-to-buy planning, return on investment, and inventory control. The course delineates the decisions made by retailing managements and reviews their available strategies. Prerequisites: MAR 4153, MAR 4613 or consent of department chairperson.

**MAR 4323 Advertising Management (ME) (3).** The study of advertising in business and society, providing a broad understanding of advertising's social, communicative, and economic purposes. An examination of the types and functions of advertising. Discussion of research, media selection, budget determination, and other elements in the total advertising process. Prerequisite: MAR 4503 or permission of instructor.

**MAR 4333 Promotional Strategy (ME) (3).** The course deals with problems of decision-making in the areas of marketing communication methods, with primary emphasis on advertising. Prerequisite: MAR 3023.

**MAR 4334 Advertising Campaign Management (ME) (3).** Strategic approaches to managing advertising campaigns, including selection of approaches; market research; consumer target markets; media; advertisements; development and control of budgets. Prerequisite: MAR 4323 or consent of Instructor.

**MAR 4403 Sales Management (ME) (3).** Analysis of field sales management with emphasis on the role of personal selling in the marketing mix, building an effective organization, and controlling and evaluating the sales force. Prerequisite: MAR 3023.

**MAR 4503 Consumer Behavior (ME) (3).** The course offers an introduction to the analysis of the consumer, as the basis for the development of the marketing mix. Prerequisite: MAR 3023.

**MAR 4613 Marketing Research (ME) (3).** An examination of the marketing research process and its role in aiding decision-making. Emphasis is placed on evaluation and utilization of research information in making marketing decisions. Prerequisites: MAR 3023, QMB 3150 or permission of instructor.

**MAR 4803 Cases in Marketing Management (ME) (3).** An analytic approach to the performance to marketing management. The elements of marketing mix as the focus of decision-making in marketing are studied, and the case method of instruction is employed. Prerequisite: MAR 4503, MAR 4614 or permission of Department Chairman.

**MAR 4853 Marketing Strategy (ME) (3).** Analysis of marketing planning strategy including: strategic marketing; situation analysis, target strategy, positioning strategy, and the strategic marketing plan. Course will utilize a computer simulation. Prerequisites: MAR 4503, MAR 4613, MAR 4803, and permission of instructor.

**MAR 4907 Independent Study in Marketing (ME) (1-6).** Individual conferences; supervised reading; reports on personal investigations. Consent of faculty tutor, Department Chairperson and Dean required.

**MAR 4933 Special Topics in Marketing (ME) (1-6).** For groups of students desiring intensive study of a particular topic or a limited number of topics, not otherwise offered in the curriculum. Consent of faculty supervisor and Department Chairperson required.

**MAR 4941 Marketing Internship (ME) (1-6).** Full-time supervised work in a selected organization. Prerequisites: At least 12 hours in marketing; consent of instructor and Department Chairperson.

**MAR 4949 Cooperative Education in Marketing (ME) (3).** Open to marketing majors who have been admitted to the Cooperative Education Program, with consent of Chairperson. Full-time supervised work with a participating organization in marketing. Report to the organization and a paper to the Chairperson are required.

**MKA 4021 Personal Selling (ME) (3).** The development of effective salesmen/customer relationships is emphasized. Selection, training, and motivation of the sales force, and the relationship between personal selling and the other elements of marketing strategy are analyzed. Prerequisite: MAR 3023.

**MKA 4244 Export Marketing (ME) (3).** The course emphasizes practical approaches to export marketing, including marketing strategies by individual firms to serve foreign markets. Operational methods of identifying, establishing, and consolidating export markets are discussed, with particular attention to the needs of the smaller business. Prerequisite: MAR 3023.

**QMB 3003 Quantitative Foundations of Business Administration (DS) (3).** Elements and extensive applications of the following quantitative tools to Accounting, Finance, Economics, Marketing, Management and Production: Algebra review, sets, combinatorics, matrices, linear and non-linear functions, derivatives and integrals with a view towards optimization. Case studies. Open only to Business Administration majors. Prerequisite: College Algebra.

**QMB 3150 Application of Quantitative Methods in Business (DS) (3).** Inference and modeling for business decisions under uncertainty. Topics covered include survey sampling, confidence intervals and hypothesis testing for mean(s), variance(s), and proportion(s), chi-square test for independence and goodness of fit, correlation, linear regression, time series, and analysis of variance. Use of computer packages to solve real business problems. Prerequisites: College Algebra and STA 3132 or the equivalent.

**QMB 4680 Simulation of Management Systems (DS) (3).** Exploration of basic concepts in computer simulation of systems. Application of these concepts to a variety of managerial problems. Discussion of waiting line models, continuous simulation models; heuristic methods; and management games. Presentation of several computer programs and languages for simulation. Exposure to the operation and analysis of some simulation models. Prerequisites: CGS 3300 and MAN 3503.

**QMB 4700 Principles of Operations Research I (DS) (3).** Application of deterministic operations research models (such as linear and non-linear programming, networks, dynamic programming, and branch and bound techniques) to managerial problems of allocation, planning, and scheduling. Prerequisite: MAN 3503.

**QMB 4905 Independent Study in Decision Sciences (DS) (1-6).** Individual conferences; supervised readings; reports on personal investigations. Consent of instructor, Department Chairperson and Dean required. P/F only.

**QMB 4930 Special Topics in Decision Sciences (DS) (1-6).** For students who wish an intensive study of a particular topic or a limited number of topics not otherwise offered in the curriculum. Consent of instructor and Department Chairperson required. Grading option.

**REE 4043 Real Estate Analysis (FI) (3).** Decision making processes for development, financing, marketing, and management of real estate within the framework of our governmental, economic, legal, and social systems; does not meet course content requirements of Florida real estate Commission for obtaining a real estate license.

**REE 4103 Appraisal of Real Estate (FI) (3).** Valuation and appraisal framework applied to residential and income producing property; role of computers; valuation theory and process as a guide to business decisions.

**REE 4204 Real Estate Financial Analysis (FI) (3).** Financial analysis and structuring of real estate projects; traditional and creative concepts and mechanisms for construction and permanent financing; portfolio problems; governmental programs; money and mortgage market analysis; computers and financial models.

**REE 4303 Real Estate Investment (FI) (3).** Advanced concepts of acquisition, ownership, and disposition of investment property; taxation and tax shelter; cash flow projection; analysis of specific types of investment property; utilization of computers as a decision-making tool; models of real estate investment analysis; case analysis and policy formulation.

**REE 4504 Real Estate Management (FI) (3).** Theories and techniques of professional management of real estate including such topics as creating a management plan; merchandising space; economics of alternates; market analysis; the maintenance process; owner-tenant manager relations; operating budgets; tax consideration; and ethics.

**REE 4733 Real Estate Land Planning (FI) (3).** Theories of city growth and structure, operations of the real estate market in land allocation; current practices in real estate land planning.

**REE 4754 Real Estate and Regional Development Policy (FI) (3).** A capstone course in integrating all the aspects of real estate and regional development learned in previous courses, projects, cases, and field trips. Prerequisite: Permission of instructor.

**REE 4814 Real Estate Marketing (FI) (3).** Techniques of selecting, training, and compensating sales personnel; obtaining and controlling listings; process and methods involved in the selling of real estate; promotion activities; including advertising and public relations; growth problems; professionalism; and ethics.

**REE 4905 Independent Study in Real Estate (FI) (1-6).** Individual conferences; supervised readings; reports on personal investigations. Consent of faculty tutor, Department Chairperson, and Dean required.

**REE 4930 Special Topics in Real Estate (FI) (1-6).** For groups of students desiring intensive study of a particular topic or a limited number of topics, not otherwise offered in the curriculum. Consent of faculty tutor and Department Chairperson required.

**RMI 3011 Principles of Risk and Insurance (FI) (3).** Risk Management, Elements of Risk Theory and Risk Bearing. The Insurance Industry, fundamentals and legal concepts in insurance. Overview of property and liability as well as life insurance policies.

**RMI 4085 Introduction to International Insurance (FI) (3).** Economic analysis of insurance trade. Business operations. International Insurance Marketing, Underwriting Claims Adjust-

ments and Settlements. International insurance funds flow and regulations. Issues in international insurance.

**RMI 4115 Life Insurance (FI) (3).** Structure and Purposes of Life Insurance. Types and analysis of life insurance contracts. Elementary life insurance mathematics. Fundamentals of private pensions and group insurance.

**RMI 4117 Personal Insurance Planning (FI) (3).** Analysis of methods of handling personal risk exposures including insurance coverage alternatives. Integrating life, health and accident, property and liability, profit-sharing; private and governmental insurance and pension programs. Prerequisite: RMI 3011.

**RMI 4124 Health Insurance (FI) (3).** The Economics of Health Insurance Types of Coverages; Marketing, Underwriting, Claims Adjustment and Administration. Private and Social Insurance programs. Regulations.

**RMI 4135 Employee Benefit Plans (FI) (3).** The concept of group insurance Marketing, Underwriting Claims Treatment and Administration of Group Policies. Establishment, Funding and Benefits of Private Pensions and Profit Sharing Plans. Prerequisite: RMI 4115.

**RMI 4170 Life and Health Insurance (FI) (3).** A review of life insurance contracts. Mathematics of Life Insurance. Fundamentals of Health Insurance. Life Insurance Accounting, Reserves, Operations and Investment. Prerequisite: RMI 4115.

**RMI 4200 Property and Liability Insurance (FI) (3).** Fundamentals and legal environment of Property and Liability Insurance. Major P-L insurance lines including Fire, Marine, Automobile, Worker's Compensation, Homeowners' and Liability; functions of P-L insurers.

**RMI 4220 Casualty Insurance (FI) (3).** A broad concept of casualty insurance, including a thorough review of basic policies; dailies; underwriting losses; multiple line and comprehensive forms. Subjects covered include personal liability insurance, boiler and machinery insurance, air insurance, inland and ocean marine insurance, workmen's compensation, and surety.

**RMI 4292 Property and Liability Insurance Operations (FI) (3).** In-depth study of the functions and operations of P-L insurers. Will include Marketing, Underwriting, Rate-making and Claims Functions. Also Loss Control Activities, Administration, Investment, Reinsurance and Regulation. Prerequisite: RMI 4200.

**RMI 4305 Risk Management (FI) (3).** The Elements of Risk Theory and Risk-Bearing. Risk Identification and Analysis. Methods for handling risks with quantitative analysis of available alternatives including Self-insurance and Captive insurance concepts.

**RMI 4405 Insurance Law (FI) (3).** Legal environment and essentials of insurance law. Legal and non-legal liabilities. Regulation of insurance in Florida.

**RMI 4114 Social Insurance (FI) (3).** The History and Economics of Social insurance programs. Definition of the needy. Comparative analysis of social insurance programs for death, occupational and non-occupational disability, old age and unemployment.

**RMI 4509 Business Insurance and Estate Planning (FI) (3).** Essentials and Analysis of Estate Planning. Minimization and provisions for death transfer costs on estates and business interests.

**RMI 4740 Insurance Underwriting and Claims Adjustment (FI) (3).** Examination of an underwriter's and rater's functions: Selection of risks, classification and rating. Deductibles, Reinsurances. Claims philosophy and practice, Investigation, Adjustment and Settlements.

**RMI 4910 Independent Study in Insurance (FI) (1-6).** Supervised study of insurance or insurance related topics, developments, current issues and anticipated trends. Study may be designed to investigate a specialized area or adopt a more general approach. Consent of faculty supervisor, Department Chairperson, and Dean required.

**RMI 4935 Special Topics in Insurance (FI) (1-6).** Intensive study for groups of students of a particular topic or a limited number of topics, not otherwise offered in the Curriculum. Consent of faculty supervisor and Department Chairperson required.

**STA 3132 Business Statistics (MS) (3).** The use of statistical tools in management; introduction of probability, descriptive statistics, and statistical inference as included.

**TAX 4001 Income Tax Accounting (AC) (3).** A survey of federal income taxation with emphasis on taxation of individuals and corporations, and the ethics of income tax accounting Prerequisite: ACG 4111 with grade of 'C' or higher.

**TAX 4901 Independent Study in Taxation (AC) (1-3).** Individual conferences, supervised readings, and reports on personal investigations. Prerequisite: Permission of the Director of the School of Accounting.

**TAX 4931 Special Topics in Taxation (AC) (1-3).** For groups of students wishing an intensive study of a particular topic(s) not otherwise offered in the curriculum. Prerequisite: Permission of the Director of the School of Accounting.

**TRA 4012 Transportation Logistics (ME) (3).** Consideration of transportation logistics and its relationship to production and distribution. Discussion of characteristics, management, legislation, and public regulation of various modes of transportation.

**TRA 4101 Transportation Rate Making (ME) (3).** Description and analysis of rate making, for both passenger and cargo, in the various modes of transportation including trucks, railroad, airlines, and ocean transportation. Classes may concentrate on one particular mode for practical applications.

**TRA 4203 Physical Distribution Management (ME) (3).** Distribution in overall company operations; organization of the traffic function; determination of classification and rates; integration of transportation with production flow, inventory management, warehousing, marketing policies, and plant location.

**TRA 4240 Transportation Systems and Services (ME) (3).** Survey and analysis of transportation modes, including rail, motor, air, water, pipeline and mass transit, and their impact on the social and economic systems; discussion of current problems.

**TRA 4320 Transportation Regulation (ME) (3).** Study of the economic and constitutional basis of transport regulation; the scope of regulation. Discussion of the regulation of industrial traffic and transport modes; the structure and policies of federal and state regulatory agencies.

**TRA 4380 Transportation Policy (ME) (3).** Consideration of national transportation policy; the principal policy issues currently facing the transportation modes.

**TRA 4410 Air Transportation (ME) (3).** A comprehensive introduction to the total air transportation environment including general economic characteristics of basic areas; commercial, private, corporate, and airline categories; government promotion and regulation of the industry, including aircraft manufacturing and operation; air traffic control; and airport support and functions.

**TRA 4411 Airport Management (ME) (3).** Application of management principles to airport operation, with emphasis on unique characteristics of airport finance; government relations and regulations; airline relations and interdependence.

**TRA 4412 Air Carrier Management (ME) (3).** An introduction to the broad scope of airline management practices and policies. Particular emphasis on problem analysis in financing, marketing, scheduling, fleet planning, facilities planning, maintenance, and general operations.

**TRA 4510 Mass Transportation and Urban Problems (ME) (3).** Urban and metropolitan transportation development; requirements, benefits and costs of alternative approaches to mass transit; management techniques and operating principles, policy and regulation.

**TRA 4906 Independent Study in Transportation (ME) (1-6).** Individual conferences; supervised readings; reports on personal investigations. Consent of faculty tutor, Department Chairperson, and Dean required.

**TRA 4936 Special Topics in Transportation (ME) (1-6).** For groups of students desiring intensive study of a particular topic or a limited number of topics, not otherwise offered in the curriculum. Consent of faculty supervisor and Department Chairperson required.

**TRA 4941 Transportation Internship (ME) (1-6).** Full time supervised work in a selected organization. Prerequisites: At least twelve hours in transportation; consent of instructor and Department Chairperson required.

## College of Business Administration

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**Associate Dean** *Donald W. Fair*
**Assistant Dean** *Anne M. Fiedler*
**Director, School of Accounting** *Lewis F. Davidson*
**Chairpersons:**
**Decision Sciences and Information Systems** *Daniel Robey*
**Finance** *Arun J. Prakash*
**Management and International Business** *Dana L. Farrow*
**Marketing and Environment** *Barnett A. Greenberg*

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**Tsalikis, John, Ph.D.** *(University of Mississippi), Assistant Professor, Marketing and Environment*

**Ulss, Barbara T.,** *M.Acc. (Case Western Reserve University), CPA, CDP, Instructor, Accounting*

**Valenzi, Enzo R., Ph.D.** *(Bowling Green State University), Professor, Management and International Business*

**Vasquez, Arturo, Ph.D.** *(Texas Tech University), Assistant Professor, Marketing and Environment*

**Welch, William W., Ph.D.** *(University of Michigan), Associate Professor, Finance, and Associate Director, Center for Banking and Financial Institutions.*

**Wiskeman, Richard H., Jr., MBA** *(University of Miami), CPA, Distinguished Lecturer, Accounting*

**Wrieden, John A., J.D.** *(George Mason University), Lecturer, Accounting*

**Wyman, Harold E., Ph.D.** *(Stanford University), Professor, Accounting, and Dean*

**Yeaman, Doria, J.D.** *(University of Tennessee), Associate Professor, Accounting*

**Yeh, Shu, Ph.D.,** *(UCLA), Assistant Professor, Accounting*

**Zanakis, Steve H., Ph.D.** *(Pennsylvania State University), Professor , Decision Sciences and Information Systems*

**Zdanowicz, John S., Ph.D.** *(Michigan State University), Professor Finance and Director, Center for Banking and Financial Institutions*

**Zegan, Peter J., M.S.** *(University of Florida), Lecturer, Decision Sciences and Information Systems*

# College of Education

The College of Education has a dual mission: to prepare competent and creative professionals to both serve and lead existing learning environments; and to address the social, economic, and political conditions that restrict the possibilities of educational opportunity in a multicultural, multipluralistic society. Accordingly, the College concerns itself with both education and social change.

To support its mission, the College is organized into six separate but related departments:

Educational Leadership, and Policy Studies*

Educational Psychology and Special Education

Elementary Education*

Health, Physical Education and Recreation

Middle, Secondary and Vocational Education

Urban, Multicultural and Community Education

*(Name change pending Board of Regents approval.)

Programs of studies include adult education and human resource development, art education, biology education, chemistry education, community college teaching, early childhood education, educational leadership, educational psychology (including counseling and school psychology), elementary education, English education, history education, international development education, mathematics education, modern language education, music education, parks and recreation management, physical education (teacher certification for grades k-8, teacher certification for grades 6-12, exercise physiology, and sports management), physics education, reading education, social studies education, special education, teaching English as a Second Language (TESOL), and vocational education programs (administration and supervision, business teacher education, health occupations education, technology education, organizational training, post-secondary technical education, vocational home economics education, and vocational industrial education).

The College also administers the Urban Education Program. It is comprised of the Urban Education Certificate Program and the Master's Degree in Urban Education.

Applicants to the College's programs should carefully examine the choices of major concentrations and program objectives. Because there are occasional revisions of College of Education curriculum during the academic year, some curriculum changes may not be reflected in the current catalog. Prospective students are advised to contact appropriate advisors to ask for current information regarding specific programs of interest.

General advisement is available by telephone: (305) 348-2768 for University Park, (305) 940-5820 for North Miami Campus. Broward residents may call (305) 523-4422 for North Miami Campus or 475-4156 for the Broward Program. Dade residents may call (305) 948-6747 for the Broward Program. Specific program advisement is available by prearranged personal appointment with advisors at all locations.

*Note*: The programs, policies, requirements, and regulations listed in this catalog are continually subject to review in order to serve the needs of the University's various publics and to respond to the mandates of the Florida Board of Regents and the Florida Legislature. Changes may be made without advance notice. Please refer to the General Information section for the University's policies, requirements, and regulations.

## Bachelor of Science Programs

Undergraduate students will complete at least 60 semester hours of study at the University, including a residency requirement of 30 semester hours prior to graduation. Before formal admission to the University, a student may be approved to take 15 credits as a non-degree seeking student which, if applicable to the major field of study and approved by an advisor, may be applied to the degree program.

### Reading Competence Requirement

Florida's Department of Education regulations require that teacher certification applicants for elementary and special education show evidence of preparation in specific skills for teaching reading. All undergraduate programs in the College are designed to meet this requirement.

### Professional Education Core

Every teacher education student, during the junior year, must enroll in the following courses:

| | | |
|---|---|---|
| EDF 3723 | Schooling in America | 3 |
| EDG 3321 | General Teaching Lab I: Basic Teaching Skills | 3 |
| EDG 3321L | General Teaching Lab I: Laboratory | 2 |
| EDG 3322 | General Teaching Lab II: Human Relations Skills | 3 |
| EDP 3004 | Introduction to Educational Psychology | 3 |
| EDF 3521 | Education in History | 3 |

or

| | | |
|---|---|---|
| EDF 3542 | Philosophy of Education | 3 |

Subsequent special teaching laboratories and courses build on these core courses to extend and refine knowledge and skill. All programs include one semester of student teaching in a public or approved non-public school. Student teaching requires the student to spend the entire school day on site.

Upon completion of all program requirements, the Bachelor of Science degree is awarded. The student is eligible to apply for a Florida Teaching Certificate in the field of specialization if the student has completed a College of Education State-approved program with a required 2.5 GPA in the teaching field to be taught. Other requirements for regular certification include submitting to the Florida Department of Education evidence of satisfactory CLAST scores and passing both the professional education and subject area subtests administered by the Department of Education. Applicants must also complete a state approved Professional Orientation Program approved by the Department of Education.

### Undergraduate Admission Requirements

College of Education program standards are intended to insure that students have breadth and depth of background needed for successful upper-division work in education. In addition, students are required to successfully complete three of four subsections of the CLAST prior to transferring to upper division work. The fourth subsection must be passed prior to completion of 96 hours.

Applicants to the College must submit an Application for Admission to the University and must follow the regular University procedures. Applicants must be eligible for admission to the University before admission to the College.

### Lower Division Prerequisites

All freshman and sophomore prerequisites for admission into an academic program must be satisfied with a minimum grade of 'C' before admission is completed.

Students must satisfy either the Lower Division Core requirements or the General Education requirements. In addition, students must complete a computer awareness/computer application course (3 credits) and a public speaking course (3 credits).

Test Requirements: All teacher education candidates entering at the junior level must present a minimum score of 840 on the SAT or 17 on the ACT prior

to October 1989 or 19 on the EACT and satisfactory CLAST scores.

### Undergraduate Grading Policies

Undergraduate students must have a minimum overall GPA of 2.0 in order to graduate. A grade of 'C-' or less is not acceptable toward graduation in any required program of study course, either in the College of Education or any other lower division course work used to meet General Education or Lower Division Core requirements, Furthermore, a student will not be approved for student teaching with a grade of 'C-' in any required program of study course with less than a minimum GPA of 2.5 in their field of specialization. Specific undergraduate programs may have higher grading criteria than these minimums. Students applying for Florida Teacher Certification must present a GPA of 2.5 or higher in their teaching major.

### Certification Only Students

Students choosing to pursue coursework leading toward State of Florida Teacher Certification (rather than a degree) are considered Non-Degree Seeking Students and must abide by all policies and limitations set forth for non-degree seeking students. Certification only students must verify their status with the Office of Student Services in DM 260 every semester after they have reached a maximum of 15 semester hours or they will not be allowed to register for additional courses. State certification requirements are considered to be minimum requirements, it may be necessary to register for additional prerequisite courses to enroll in a desired course. Students who register for a course but have not completed the prerequisite course(s) will be administratively dropped from the class.

## Educational Psychology and Special Education

**Stephen S. Strichart,** *Professor, Learning Disabilities and Chairperson*

**Wendy Cheyney,** *Associate Professor, Learning Disabilities*

**Marisal Gavilan,** *Associate Professor, Educational Psychology/Bilingual Education*

**Daniel A. Kennedy,** *Associate Professor/School Counseling*

**Philip J. Lazarus,** *Associate Professor, School Psychology*

**Luretha F. Lucky,** *Associate Professor, Mental Retardation*

**David E. Nathanson,** *Professor, Gifted Education and Mental Retardation*

**Howard Rosenberg,** *Associate Professor, Mental Retardation*

**Donald C. Smith,** *Professor, Educational Psychology/School Psychology*

**Jethro W. Toomer,** *Professor, Educational Psyc hology/Community Counseling*

**Judith Jones Walker,** *Assistant Professor, Counselor Education, Educational Psychology*

The Department offers a variety of programs to prepare counselors to work in school and community settings, psychologists to work in the schools, and teachers of emotionally disturbed, gifted, learning disabled, and mentally retarded students. All programs require substantial supervised fieldwork. State of Florida certification requirements are met for all programs preparing school personnel.

The Department offers the following undergraduate and certificate programs:

**Bachelor of Science**

Emotional Disturbance
Mental Retardation
Specific Learning Disabilities

**Certification Programs**

Gifted Education
Guidance

**Professional Certificate Programs**

Emotional Disturbance
Mentally Handicapped
Specific Learning Disability

### Bachelor of Science in Special Education

The undergraduate special education programs utilize a competency-based and field-centered training model and lead to approval for Florida Certification in Specific Learning Disabilities, Emotional Disturbance, and Mental Retardation. A student may elect a major in any one of the three areas. Courses leading to certification in the area of the Gifted are also offered at the graduate level.

The special education program recognizes that handicapped children are entitled to a free and appropriate public education, that all handicapped children are to be educated in the least restrictive yet most enabling environment and are to be mainstreamed to the greatest extent possible. Special educators also provide services to preschool children and adults.

Given this context, undergraduate special education programs emphasize the development of the following competencies to be demonstrated in both the University and field settings:

1. Identifying and diagnosing students with learning and behavior problems.

2. Prescribing and implementing appropriate individual educational plans to meet these problems.

3. Effecting appropriate instruction for children with learning and behavior problems.

4. Managing classroom behavior.

5. Planning for mainstreaming and parent conferencing.

Diagnostic-prescriptive and management skills are to be demonstrated with students who range from pre-school through adulthood, who are mildly, moderately, severely, and profoundly handicapped, and who represent multicultural, multilingual backgrounds.

### Lower Division Preparation

An Associate in Arts Degree or equivalent preparation in basic general education. General Education Requirements as approved by the faculty of the College. See advisor for prerequisites.

To qualify for admission to the program, FIU undergraduates must have met all the lower division requirements including CLAST, completed 60 semester hours, and must be otherwise acceptable into the program.

**Upper Division Program:** (68)

| | | |
|---|---|---|
| EDF 3723 | Schooling in America | 3 |
| EDG 3321 | General Teaching Lab I | 3 |
| EDG 3321L | General Teaching Lab I | 2 |
| EDG 3322 | General Teaching Human Relations, Lab II | 3 |
| EDP 3004 | Introduction to Educational Psychology | 3 |
| EDF 3521 | Education in History | 3 |
| | or | |
| EDF 3542 | Philosophy of Education | |
| EEX 3010C | Introduction to Exceptional Children and Youth[1] | 3 |
| SPA 3000 | Introduction to Language Development and Communication Disorders | 3 |
| EEX 3221 | Assessment of Exceptional Children and Youth | 3 |
| EEX 3202 | Foundations of Exceptionality[1] | 3 |
| EEX 4241 | Academic Skills for Exceptional Children[1] | 3 |
| EMR 4251 | Educational Planning for the Mentally Retarded[1,2,3] | 3 |
| | or | |

| | | |
|---|---|---|
| ELD 4240 | Educational Planning for Specific Learning Disabilities[1,2,3] | |
| | or | |
| EED 4227C | Educational Planning for Emotional Handicaps[1,2,3] | |
| EEX 4242 | Academic Skills II[1,3] | 3 |
| EEX 4601 | Behavioral Approaches to Classroom Learning I[1] | 3 |
| EEX 4611 | Behavioral Approaches to Classroom Learning II[1,3] | 3 |
| RED 4150 | Teaching Primary Reading | 1,43 |
| LAE 4314 | Teaching Elementary Language Arts[1,4] | 3 |
| MAE 4312 | Inquiry in Mathematics in the Elementary School[1,4] | 3 |
| EEX 4861 | Student Teaching[1] | 12 |
| Elective Course with advisor's consultation | | 3 |

[1]Field Work Required.

[2]One of these three courses must be taken based on major.

[3]Senior Block

[4]Must also register for EEX 4905 for 0 credit hours.

*Note*: Courses within the undergraduate program require field placement during school hours. In addition to a full-time student teaching placement during the final semester students engage in a senior BLOCK experience the first semester of their senior year. This experience requires five mornings per week of placement in an educational setting and class attendance at the University. Permission to student teach is contingent upon satisfactory completion of all requirements specified in the program.

## Elementary Education*

**Alicia Mendoza,** *Associate Professor, Early Childhood/Elementary Education and Chairperson*

**John Bath,** *Assistant Professor, Science, Mathematics, and Elementary Education*

**Toni Bilbao,** *Associate Dean, Elementary Education*

**Victoria J. Dimidjian,** *Professor, Early Childhood Education*

**Sharon W. Kossack,** *Professor, Reading Education*

**Nancy Marshall,** *Associate Professor, Reading and Language Arts Education*

**Grover C. Mathewson,** *Associate Professor, Reading and Language Arts Education*

**Lynne Miller,** *Assistant Professor, Reading and Language Arts Education*

**George S. Morrison,** *Professor, Early Childhood Education and Urban Education*

**Edward M. Reichbach,** *Associate Professor, Social Studies Education*

**S. L. Woods,** *Associate Professor, Elementary Education*

The department offers programs in elementary, early childhood, and reading education. The elementary education program may be taken at the bachelor's, master's, or doctoral levels. The early childhood and reading programs offer master's and doctoral degrees only.

The department is strongly committed to field experience as a part of its programs. The field component of the bachelor's degree in Elementary Education is realized through Field Experience, which is taken concurrently with methods courses, and Student Teaching.

The department is also committed to service to the community and the extension of knowledge through research.

*(Name change pendiing Board of Regents approval.)

### Bachelor of Science in Elementary Education: - Grades 1-6

#### Lower Division Preparation

An Associate in Arts Degree or equivalent preparation in basic general education. If a student has not completed equivalents of the courses noted below, these courses must be completed with a grade of 'C' or higher prior to enrollment in requisite courses at the University.

To qualify for admission to the program, FIU undergraduates must have met all the lower division requirements including CLAST, completed 60 semester hours, and must be otherwise acceptable into the program.

#### General Education

| | |
|---|---|
| Mathematics (College Algebra or higher) | 6 |
| Physical Science | 3 |
| Biological Science | 3 |
| Music skills course (or demonstrated competencies) | 3 |
| Speech | 3 |
| Computer awareness/computer application | 3 |

**Upper Division Program:** (74)

**Core Courses:** (17)

| | | |
|---|---|---|
| EDF 3723 | Schooling in America | 3 |
| EDG 3321 | General Teaching Laboratory I | 3 |
| EDG 3321L | Laboratory | 2 |
| EDG 3322 | General Teaching Laboratory II | 3 |
| EDP 3004 | Introduction to Educational Psychology | 3 |
| EDF 3521 | Education in History | |
| | or | |
| EDF 3542 | Philosophy of Education | 3 |

**Program Courses:** (30)

(Corequisite for all program courses: EDE 4940, EDE 4941 or EDE 4942)

| | | |
|---|---|---|
| ARE 3313 | Teaching Elementary Art | 3 |
| MUE 3313 | Teaching Elementary Music | 3 |
| EDE 4451 | Evaluation in Elementary Education | 3 |
| HLP 3013 | Teaching Elementary Health and Education | 3 |
| LAE 4314 | Teaching Elementary Language Arts | 3 |
| MAE 4312 | Teaching Elementary Mathematics | 3 |
| RED 4150 | Teaching Primary Reading | 3 |
| RED 4311 | Teaching Intermediate Reading | 3 |
| SCE 4310 | Teaching Elementary Science | 3 |
| SSE 4312 | Teaching Elementary Social Studies | 3 |

Field Experience I-A, I-B and I-C (to be taken with Program Courses above).

**Field Experience I:** (3)

Students are required to spend a minimum of two hours per week per program course in an assigned elementary public school for each of the Field Experience courses.

| | | |
|---|---|---|
| EDE 4940 | Field Experience: Elementary Education (Fall) | 1 |
| EDE 4941 | Field Experience: Elementary Education (Spring) | 1 |
| EDE 4942 | Field Experience: Elementary Education (Summer) | 1 |

#### Student Teaching Block

All lower division prerequisites and program requirements must be completed before taking this block.

The Block consists of Student Teaching Internship and Senior Seminar.

**Student Teaching Internship:** (15)

This is a full time commitment for one semester after all other program courses have been completed successfully with a grade of 'C' or higher. Student must make an application and register for this course. Student Teach-

ing Internship is *not* offered in the summer term.

| | | |
|---|---|---|
| EDE 4943 | Student Teaching Internship | 12 |
| EDE 4936 | Senior Seminar in Elementary Education | 3 |

**Guided Electives in an Area of Concentration:** (9)

Students using Primary Education (formerly Early Childhood) as a guided elective area of concentration must complete all of the following:

| | | |
|---|---|---|
| EEC 4005 | Early Childhood Education Programs | 3 |
| EEC 4204 | Curriculum and Instruction in Early Childhood Education | 3 |
| EEC 4301 | Trends in Early Childhood Education | 3 |

A minimum of two Early Childhood Field Experience courses must also be completed from among:

| | | |
|---|---|---|
| EEC 4940 | Field Experience: Early Childhood (Fall) | 1 |
| EEC 4941 | Field Experience: Early Childhood (Spring) | 1 |
| EEC 4942 | Field Experience: Early Childhood (Summer) | 1 |

Students using Pre-Kindergarten as a guided elective area of concentration must complete all of the following:

| | | |
|---|---|---|
| EEC 4266 | Curriculum Programs - Infancy | 3 |
| EEC 4267 | Curriculum Programs - Preschooler | 3 |
| EEC 4704 | The Education and Development of Young Children | 3 |

Total Semester Hours for Elementary Education Majors 74

Total Semester Hours for Elementary Education Majors With an Area of Concentration in Primary Education 76

## Health, Physical Education and Recreation

**Ida F. Chadwick,** *Associate Professor, Physical Education and Chairperson*

**Judith A. Blucker,** *Professor, Physical Education, and Vice Provost*

**Richard Lopez,** *Associate Professor, Exercise Physiology*

**George B. Pearson,** *Professor, Physical Education*

**Thomas K. Skalko,** *Associate Professor, Therapeutic Recreation*

**Robert M. Wolff,** *Associate Professor, Parks and Recreation Management*

The Department of Health, Physical Education, and Recreation offers five programs which lead to the a Bachelor of Science degree. These programs include: Exercise Physiology, Parks and Recreation Management, Teacher Certification in Physical Education for Grades K-8, Teacher Certification in Physical Education for Grades 6-12, and Sports Management.

The program requirements and descriptions which are listed below are subject to change without advanced notice. Program faculty should be consulted for academic advisement.

### Bachelor of Science in Health Education

#### Exercise Physiology Track

The undergraduate exercise physiology track is designed to prepare individuals to work in the field of exercise testing, cardiac rehabilitation, and adult fitness. The track will prepare students for two certification examinations offered by the American College of Sports Medicine. The first certification examination is the Exercise Test Technology examination and the second is the Health/Fitness Instructor certification.

#### Lower Division Preparation

Students will be required to meet the University lower division requirements. In addition, they will be required to have a minimum of six credits in the biological and physical sciences. At least three of the six credits must be in biology.

**Entrance Exam**

Students will be required to meet the current entrance examination requirements of the College of Education. Presently, those requirements are 840 on the SAT or 17 on the ACT or 19 on the ECAT.

**Upper Division Program:** (60)

| | | |
|---|---|---|
| ZOO 3731 | Human Anatomy | 3 |
| ZOO 3731L | Human Anatomy Lab | 1 |
| | or | |
| ZOO 3733 | Human Gross Anatomy | |
| ZOO 3733L | Human Gross Anatomy Lab | |
| PCB 3703 | Human Physiology I | 3 |
| PCB 3704 | Human Physiology II | 3 |
| PCB 3711 | Physiological Mechanisms | 3 |
| | or | |
| An Advisor Approved Alternative | | |
| PET 3351 | Exercise Physiology | 3 |
| PET 4383 | Evaluation in Exercise Physiology | 3 |
| PET 3310 | Kinesiology | 3 |
| | or | |
| PHT 3122 | Clinical Kinesiology | |
| | or | |
| OTH 3413 | Applied Kinesiology | |
| CGS 2060 | Introduction to Microcomputers | 3 |
| | or | |
| Demonstrated Competency in Microcomputers | | |
| PET 4622 | Athletic Injuries | 3 |
| PCB 3241 | Physiology of Aging | 3 |
| PET 5387 | Exercise Test Technology | 3 |
| PEP 5115 | Health/Fitness Instructor | 3 |
| HUN 2201 | Principles of Nutrition | 3 |
| | or | |
| HUN 3017 | Nutrition for Health Professionals | |
| PET 4940 | Internship in Exercise Physiology | 1-15 |
| Electives | | 6-23 |

### Bachelor of Science in Parks and Recreation Management

The Parks and Recreation undergraduate curriculum offers professional preparation programs designed to prepare students for employment in the leisure service delivery system. The program is oriented towards supervisory and management employment opportunities.

A student may elect to gain competencies in Leisure Service Manaement, Parks Management, and Therapeutic Recreation.

*Note:* It is important to note that the Parks and Recreation Management curriculum is under review and changes to the curriculum are expected. Please see an advisor when scheduling courses.

#### Lower Division Preparation

To qualify for admission to the program, FIU undergraduates must have met all the lower division requirements including CLAST, completed 60 semester hours, and must be otherwise acceptable into the program.

**Upper Division Program:** (63-68)

**Required Core Courses:** (42)

| | | |
|---|---|---|
| LEI 3000 | Leisure & Recreation in America | 3 |
| LEI 3437 | Program Development in Parks and Recreation Management | 3 |
| | or | |
| LEI 4700 | Programming for Therapeutic Recreation | 3 |
| LEI 3542 | Principles of Parks and Recreation Management | 3 |
| LEI 3630 | Care, Maintenance and Design of Facilities | 3 |

| | | |
|---|---|---|
| LEI 3501 | Liability and Law in Leisure, Recreation & Sports | 3 |
| ACG 3024 | Financial Accounting for Managers | 3 |
| LEI 4940 | Internship | 6 |
| LEI 4941 | Internship II | 9 |

**Leisure Service Management Emphasis:** (21)

| | | |
|---|---|---|
| MAN 3701 | Business and Society | 3 |
| LEI 4573 | Leisure Services Marketing | 3 |
| LEI 4590 | Seminar in Parks and Recreation Management | 3 |
| LEI 4890 | Private & Commercial Recreation Management | 3 |
| Advised Electives | | 9 |

**Parks Management Emphasis:** (21)

| | | |
|---|---|---|
| ARC 4354 | Construction and Design of Natural Recreation Areas | 3 |
| BOT 3823 | Horticulture | 3 |
| LEI 3624 | Turf Grass Management | 3 |
| PCB 3043 | Fundamentals of Ecology | 3 |
| PCB 3043L | Fundamentals of Ecology Laboratory | 2 |
| Advised Electives | | 7 |

**Therapeutic Recreation Emphasis:** (22-26)

| | | |
|---|---|---|
| LEI 3703 | Principles of Therapeutic Recreation | 3 |
| LEI 4716 | Issues and Trends in Therapeutic Recreation | 3 |
| LEI 4711 | Client Assessment and Evaluation in Therapeutic Recreation | 3 |
| LEI 4760 | Therapeutic Recreation & Disabling Conditions | 3 |
| LEI 4813 | Leisure Education and Facilitation Techniques | 3 |
| LEI 4931 | Special Topics | 1 |
| PCB 3702 | Intermediate Human Physiology[1] | 3 |
| ZOO 3731 | Human Anatomy[1] | 3 |
| ZOO 3731L | Human Anatomy Lab[1] | 1 |
| CLP 4144 | Abnormal Psychology[1] | 3 |
| Advised Electives* | | 0-6 |

[1]If the student has these courses at the freshman or sophomore level it will not be necessary to repeat the courses, but the student must have completed a minimum of eighteen semester hours from three of the following six areas: adaptive physical education, biological/physical sciences, human services, psychology, sociology, or special education.

The above proposed curriculums have been designed to meet or exceed the standards established by the National Recreation and Park Association/American Association for Leisure and Recreation's Council on Accreditation and the National Council for Therapeutic Recreation Certification.

## Bachelor of Science in Physical Education: Grades K-8

This program is designed for individuals who wish to become certified to teach physical education in the elementary and middle schools. Upon successful completion of the program and the requirements specified by the Florida Department of Education, degree recipients are eligible for regular teacher certification in the State of Florida.

### Lower Division Preparation

#### Required Courses

First Aid; a minimum of two semester hours of human anatomy or combined anatomy/physiology; physical education major courses in social and folk or modern dance, aquatics, gymnastics, in addition to a minimum of two individual sports and two team sports. All required courses must be completed with a grade of 'C' or higher.

To qualify for admission to the program, FIU undergraduates must have met all the lower division requirements including CLAST, completed 60 semester hours, and must be otherwise acceptable into the program.

*Note:* Students who have not completed the required courses may apply for admission if the deficiencies are not greater that eight semester hours. However, all program prerequisites must be completed before entry into the senior year. Students must meet all College of Education admission requirements.

**Upper Division Program:** (62)

**Professional Education:** (17)

| | | |
|---|---|---|
| EDF 3723 | Schooling in America | 3 |
| EDG 3321 | General Teaching Laboratory I | 3 |
| EDG 3321L | Laboratory | 2 |
| EDG 3322 | General Teaching Laboratory II | 3 |
| EDP 3004 | Introduction to Educational Psychology | 3 |
| EDF 3521 | Education in History or | |
| EDF 3542 | Philosophy of Education | 3 |

**Subject Matter Specialization:** (45)

| | | |
|---|---|---|
| DAE 3371 | Dance in the Elementary and Middle School | 3 |
| PEO 4041 | Games in the Elementary and Middle School | 3 |
| PEP 3205 | Gymnastics in the Elementary and Middle School | 3 |
| PET 3310 | Kinesiology | 3 |
| PET 3351 | Exercise Physiology | 3 |
| PET 3640 | Adapted Physical Education | 3 |
| PET 4035 | Motor Learning and Development | 3 |
| PET 4401 | Administration of Physical Education | 3 |
| PET 4464 | Special Teaching Lab: Physical Education: K-8 | 3 |
| PET 4510 | Evaluation in Physical Education | 3 |
| PET 4662 | Athletic Injuries | 3 |
| PET 4944 | Student Teaching: Grades K-8 | 12 |

## Bachelor of Science in Physical Education: Grades 6-12

This program is designed for individuals who wish to become certified to teach physical education in the middle and secondary schools. Upon successful completion of the program and the requirements specified by the Florida Department of Education, degree recipients are eligible for regular teacher certification in the State of Florida.

### Lower Division Preparation

#### Required Courses

First Aid or personal health or health education; a minimum of two semester hours of anatomy or combined anatomy/physiology; physical education major courses in dance, aquatics, gymnastics, in addition to a minimum of two individual sports and two team sports. All required courses must be completed with a grade of 'C' or higher.

To qualify for admission to the program, FIU undergraduates must have met all the lower division requirements including CLAST, completed 60 semester hours, and must be otherwise acceptable into the program.

*Note:* All physical education majors are expected to be proficient in the following activities: football, soccer, volleyball, basketball, folk, social, and square dance, track and field, tennis, golf, gymnastics, and badminton. At the lower division, students should enroll in those courses in which they are least proficient. Students who have not completed the required courses may apply for admission if the deficiencies are not greater than 12 semester hours. However, all program prerequisites must be completed prior to entry into the senior year.

**Upper Division Program:** (65)

**Professional Education:** (20)

| | | |
|---|---|---|
| EDF 3723 | Schooling in America | 3 |

| | | |
|---|---|---|
| EDG 3321 | General Teaching Laboratory I | 3 |
| EDG 3321L | Laboratory | 2 |
| EDG 3322 | General Teaching Laboratory II | 3 |
| EDP 3004 | Introduction to Educational Psychology | 3 |
| EDF 3521 | Education in History | |
| | or | |
| EDF 3542 | Philosophy of Education | 3 |
| RED 4235 | Special Teaching Lab: Reading | 3 |

**Subject Matter Specialization:** (45)

| | | |
|---|---|---|
| PET 3310 | Kinesiology | 3 |
| PET 3351 | Exercise Physiology | 3 |
| PET 3640C | Adapted Physical Education | 3 |
| PET 4510 | Evaluation in Physical Education | 3 |
| PEO 4004 | Coaching Sports | 3 |
| PET 4622C | Athletic Injuries | 3 |
| PET 3724 | Physical Education in the Middle School | 3 |
| PET 4035 | Motor Learning and Development | 3 |
| PET 4442 | Physical Education in the Secondary School | 3 |
| PEP 4102 | Methods and Curriculum for Fitness Development | 3 |
| PET 4401 | Administration of Physical Education | 3 |
| PET 4945L | Student Teaching Grades 6-12 | 12 |

### Sports Management Track

The undergraduate sports management track prepares individuals for managerial positions in the sports-related fields. The core program emphasizes the physiological and psychological aspects of sport and the development of managerial and administrative skills. Program electives allow students to pursue a specialization in the area of interest.

### Lower Division Preparation

It is recommended that students complete introductory accounting and management courses as well as a variety of sports skill classes.

To qualify for admission to the program, students must have met all lower division requirements of the University. SAT or ACT test scores must be submitted. If the test scores do not meet the College's requirements, the student may request that a program advisor review the scores and other academic records for consideration for admission.

**Upper Division Program:** (60)

| | | |
|---|---|---|
| APB 2863 | Foundations of Human Physiology | 3 |
| PET 3310 | Kinesiology | 3 |
| PET 3351 | Exercise Physiology | 3 |
| PET 4004 | Coaching Sports | 3 |
| PET 4622 | Athletic Injuries | 3 |
| PET 5416 | Sports Administration and Management | 3 |
| PET 5936 | Special Topics | 6 |
| PEP 5115 | Fitness Instructor | 3 |
| PET 4946 | Sports Administration Internship | 6-9 |
| BUL 4111 | Business Law | 3 |
| | or | |
| PAD 4603 | Administrative Law | |
| MAN 3025 | Organization and Management Decision Styles | 3 |
| | or | |
| PAD 4432 | Administration Leadership and Behavior | |
| LEI 3542 | Principles of Parks and Recreational Management | 3 |
| | or | |
| LEI 3524 | Personnel Management in Parks and Recreation | |

**Advised Program Electives:** (24-30)

With the prior approval and knowledge of the program advisor, students will be allowed to choose electives which build a specialized degree program based on the student's long-term career goals. Examples of appropriate electives would include but not be limited to at least 12 total hours from such areas as Public Administration, Nutrition, Psychology, Sociology, and Parks and Recreation. Other appropriate courses from across the University may be used with prior approval from the program advisor and the selected department.

*Note:* This program is under review and revision. Students should consult program faculty for academic advisement.

## Middle, Secondary and Vocational Education

**Luis A. Martinez-Perez,** *Associate Professor, Science Education and Chairperson*

**Arnhilda Badia,** *Associate Professor, Modern Languages Education*

**Rosemere Baum,** *Associate Professor, Home Economics Education, Vocational Education*

**Curtis H. Bradley,** *Professor, Organizational Training, Vocational-Industrial Education*

**David Y. Chang,** *Assistant Professor, Art Education*

**Myma P. Crabtree,** *Professor, Home Economics Education, Vocational Education*

**Robert K. Gilbert,** *Associate Professor, Mathematics Education*

**A. Dean Hauenstein,** *Professor, Vocational Education, Technology Education*

**Edwin C. McClintock,** *Professor, Mathematics Education*

**Dominic A. Mohamed,** *Associate Professor, Vocational Administration and Supervision, Vocational Education*

**George E. O'Brien,** *Assistant Professor, Science Education*

**Clem Pennington,** *Associate Professor, Art Education*

**Janice R. Sandiford,** *Associate Professor, Health Occupations Education, Computer Education, Vocational Education, and Assistant Dean for North Miami and Broward*

**Robert Shostak,** *Professor, English Education*

**Robert F. Testa,** *Associate Professor, Educational Foundations, Music Education*

**Jan L. Tucker,** *Professor, Social Studies Education*

**Robert Vos,** *Associate Professor and Associate Dean, Organizational Training, Technical Education, Vocational Education*

**Michael J. Wagner,** *Professor, Music Education*

The Department of Middle, Secondary and Vocational Education offers undergraduate and graduate programs for students who are interested in teaching, Middle, Secondary, and Vocational Education; and in Art and Music in 1-12 grades.

The undergraduate and certificate programs are as follows:

**General: Grades 1 - 12**

Art Education
Modern Languages Education
Music Education

**Secondary Education : Grades 7 - 12**

Biology Education
Chemistry Education
English Education
History Education
Mathematics Education
Physics Education
Social Studies Education

**Vocational Home Economics Education**

**Vocational Industrial Education** with tracks in:

Business Teacher Education
Health Occupations Education
Technology Education

Organizational Training
Post-Secondary Technical Education

**Certificate Programs**
Organizational Training
Vocational Industrial
Advanced Vocational Industrial

### General Information

Upon admission to the University and to the College, each student major in the department is assigned an advisor in the teaching field who will assist the student in constructing a program of study. The program of study must comply with the goals of the student. Upon successful completion of the work specified in the program of study, the student is awarded the Bachelor of Science Degree with a major in a specified subject matter area or level of schooling (e.g., art, English, mathematics, music, vocational education) and is eligible for regular teacher certification in the State of Florida upon successful completion of requirements specified by the Florida Department of Education.

### Laboratory Experiences

Most courses offered by the department require observation and participation in selected schools. The course descriptions identify the courses which require in-school classroom experiences guided by the directing classroom teacher and a College of Education faculty member.

The student teaching assignments are fulfilled in designated field centers. This experience is on a full-time basis for one semester. Permission to student-teach is contingent upon successful completion of all other requirements specified in the program of study. Students may be assigned to do their student teaching during either the Fall or Spring semesters of their senior year. There is no student teaching during the Summer semester.

Application for student teaching is the responsibility of the student. Necessary forms may be obtained from the department office and should be returned to the Department early, but no later than the semester prior to student teaching.

## Bachelor of Science in Art Education: Grades 1-12

### Lower Division Preparation

An Associate in Arts Degree in Art, or (a) Art History Survey (6 semester hours) and (b) Basic and Figure Drawing (6 semester hours) and (c) Two and Three-Dimensional Design (6 semester hours).

To qualify for admission to the program, FIU undergraduates must have met all the lower division requirements including CLAST, completed 60 semester hours, and must be otherwise acceptable into the program.

**Upper Division Program:** (71)

**Subject Matter Specialization:** (30)

| | | |
|---|---|---|
| ARH 4470 | Contemporary Art, Art History Elective | 6 |
| ART 3111C | Ceramics | 3 |
| ART 3150C | Jewelry and Metals | 3 |
| ART 3401C | Printmaking | 3 |
| ART 3510C | Painting | 3 |
| ART 3601C | Photography | 3 |
| ART 3702C | Sculpture | 3 |
| CTE 4421 | Creative Textiles | 3 |
| Art Electives | | 3 |

**Professional Education:** (41)

| | | |
|---|---|---|
| EDF 3723 | Schooling in America | 3 |
| EDG 3321 | General Teaching Laboratory I | 3 |
| EDG 3321L | Laboratory | 2 |
| EDG 3322 | General Teaching Laboratory II | 3 |
| EDP 3004 | Introduction to Educational Psychology | 3 |
| EDF 3521 | Education in History or | |
| EDF 3542 | Philosophy of Education | 3 |

**Reading Requirement**

| | | |
|---|---|---|
| RED 4325 | Special Teaching Laboratory: Reading | 3 |

**Special Methods and Student Teaching**

A student must complete the six semester hours of foundations course, and all core courses before enrolling in 4000-level special methods courses.

*Note:* ARE 4316 and ARE 4341 must be taken in sequence before ARE 4940.

| | | |
|---|---|---|
| ARE 4316 | Special Teaching Laboratory: Art in Grades K-6 (Spring Semester only) | 3 |

Prerequisite or corequisite of 18 hours required in subject matter specialization.

| | | |
|---|---|---|
| ARE 4341 | Special Teaching Laboratory: Art in Grades 7-12 (Fall Semester only) | 3 |

Prerequisite or corequisite of 30 hours required in subject matter specialization

| | | |
|---|---|---|
| ARE 4940 | Student Teaching in Art | 12 |
| Advisor Approved Electives | | 3 |

## Bachelor of Science in Biology Education: Grades 7-12

### Lower Division Preparation

Eight semester hours of biology; eight semester hours of general chemistry; eight semester hours of general physics; mathematics through analytical geometry.

To qualify for admission to the program, FIU undergraduates must have met all the lower division requirements including CLAST, completed 60 semester hours, and must be otherwise acceptable into the program.

**Upper Division Program:** (67)

**Subject Matter Specialization:** (35)

| | |
|---|---|
| Genetics | 3 |
| Ecology | 5 |
| Physiology/Biochemistry | 5 |
| Electives in Biology[1,2] | 7 |
| Organic Chemistry | 10 |
| Quantitative Analysis | 5 |

**Professional Education:** (32)

| | | |
|---|---|---|
| EDF 3723 | Schooling in America | 3 |
| EDG 3321 | General Teaching Laboratory I | 3 |
| EDG 3321L | Laboratory | 2 |
| EDG 3322 | General Teaching Laboratory II | 3 |
| EDP 3004 | Introduction to Educational Psychology | 3 |
| EDF 3521 | Education in History or | |
| EDF 3542 | Philosophy of Education | 3 |

**Reading Requirement**

| | | |
|---|---|---|
| RED 4325 | Special Teaching Laboratory: Reading | 3 |

**Special Methods and Student Teaching**

A student must complete six semester hours of foundations courses and all core courses before enrolling in 4000-level special methods courses. A student must enroll for SCE 4330 and SCE 4944 in consecutive semesters.

| | | |
|---|---|---|
| SCE 4330 | Special Teaching Laboratory: Science | 3 |

Prerequisite or corequisite of 20 hours required in subject matter specialization.

| | | |
|---|---|---|
| SCE 4944 | Student Teaching | 9 |

[1]BSC 3023, 3033; 3253; OCB 3010; BOT 3823; PCB 3703; BSC 3915 and BSC 4914 are not applicable to this requirement.

[2]Sufficient electives to complete 30 semester hours of upper division biology.

## Bachelor of Science in Chemistry Education: Grades 7-12

### Lower Division Preparation

Eight semester hours of general chemistry; eight semester hours of general physics; mathematics through Calculus I.

**Recommended Course:** Organic Chemistry

To qualify for admission to the program, FIU undergraduates must have met all the lower division requirements including CLAST, completed 60 semester hours, and must be otherwise acceptable into the program.

**Upper Division Program:** (62)

**Subject Matter Specialization:** (30)

| | | |
|---|---|---|
| Organic Chemistry I and II | | 6 |
| Organic Chemistry Laboratories | | 3 |
| Quantitative Analysis and Laboratories | | 5 |
| Physical Chemistry and Laboratory | | 5 |
| Electives in Chemistry[1] | | 8 |
| Calculus II | | 3 |

**Professional Education:** (32)

| | | |
|---|---|---|
| EDF 3723 | Schooling in America | 3 |
| EDG 3321 | General Teaching Laboratory I | 3 |
| EDG 3321L | Laboratory | 2 |
| EDG 3322 | General Teaching Laboratory II | 3 |
| EDP 3004 | Introduction to Educational Psychology | 3 |
| EDF 3521 | Education in History or | |
| EDF 3542 | Philosophy of Education | 3 |

**Reading Requirement**

| | | |
|---|---|---|
| RED 4325 | Special Teaching Laboratory: Reading | 3 |

**Special Methods and Student Teaching**

A student must complete six hours of foundations courses and all core courses before enrolling in 4000-level special methods courses. A student must enroll for SCE 4330 and SCE 4944 in consecutive semesters.

| | | |
|---|---|---|
| SCE 4330 | Special Teaching Laboratory: Science | 3 |

Prerequisite or corequisite of 20 hours required in subject matter specialization.

| | | |
|---|---|---|
| SCE 4944 | Student Teaching | 9 |

[1]Sufficient electives to complete 30 semester hours of upper division chemistry.

## Bachelor of Science in English Education: Grades 7-12

### Lower Division Preparation

Two courses in freshman English; survey of English literature I, II; six hours of English at the 2000-level, literature or composition. If the required courses beyond freshman composition are not completed they will be included in the student's program in addition to regular upper division requirements.

To qualify for admission to the program, FIU undergraduates must have met all the lower division requirements including CLAST, completed 60 semester hours, and must be otherwise acceptable into the program.

**Upper Division Program:** (62)

**Subject Matter Specialization:** (30)

| | | |
|---|---|---|
| LIN 3010 | Introduction to General Linguistics | 3 |
| LIN 4680 | Modern Grammars (Prerequisite: LIN 3010) | 3 |
| LAE 4464 | Adolescent Literature | 3 |
| American Literature | | 6 |
| English Literature | | 6 |
| Shakespeare | | 3 |
| Restricted electives | | 6 |

**Professional Education:** (35)

| | | |
|---|---|---|
| EDF 3723 | Schooling in America | 3 |
| EDG 3321 | General Teaching Laboratory I | 3 |
| EDG 3321L | Laboratory | 2 |
| EDG 3322 | General Teaching Laboratory II | 3 |
| EDP 3004 | Introduction to Educational Psychology | 3 |
| EDF 3521 | Education in History or | |
| EDF 3542 | Philosophy of Education | 3 |

**Reading Requirement**

| | | |
|---|---|---|
| RED 4325 | Special Teaching Laboratory: Reading | 3 |

A student must complete six semester hours of foundations courses and all core courses before enrolling in 4000-level special methods courses. A student must enroll for LAE 4335 and LAE 4942 in consecutive semesters.

| | | |
|---|---|---|
| LAE 4335 | Special Teaching Laboratory English | 3 |

Prerequisite of 21 hours required in English courses beyond lower division English prerequisites for this program.

| | | |
|---|---|---|
| LAE 4942 | Student Teaching | 12 |

Prerequisite of 27 hours of English courses beyond lower division prerequisites. (Program students only).

## Bachelor of Science in History Education: Grades 7-12

### Lower Division Preparation

Two courses in history and one course in the social sciences beyond freshman social science core (selected from anthropology, economics, geography, political science, or sociology).

To qualify for admission to the program, FIU undergraduates must have met all the lower division requirements including CLAST, completed 60 semester hours, and must be otherwise acceptable into the program.

**Upper Division Program:** (65)

**Subject Matter Specialization:** (30)

| | | |
|---|---|---|
| HIS 3001 | Introduction to History | 3 |
| U.S. History at 3000, 4000, or 5000 levels | | 6 |
| History other than U.S. | | 12 |
| United States Government | | 3 |
| SSE 4380 | Global Perspectives | 3 |
| Advisor Approved Electives | | 3 |

**Professional Education:** (35)

| | | |
|---|---|---|
| EDF 3723 | Schooling in America | 3 |
| EDG 3321 | General Teaching Laboratory I | 3 |
| EDG 3321L | Laboratory | 2 |
| EDG 3322 | General Teaching Laboratory II | 3 |
| EDP 3304 | Introduction to Educational Psychology | 3 |
| EDF 3521 | Education in History or | |
| EDF 3542 | Philosophy of Education | 3 |

**Reading Requirement**

| | | |
|---|---|---|
| RED 4325 | Special Teaching Laboratory: Reading | 3 |

**Special Methods and Student Teaching**

A student must complete six semester hours of foundations courses and all core courses before enrolling in 4000-level methods courses. A student must enroll for SSE 4384C and SSE 4942 in consecutive semesters.

| | | |
|---|---|---|
| SSE 4384C | Special Teaching Laboratory: Social Studies | 3 |
| SSE 4942 | Student Teaching | 12 |

It is recommended that the student consider a double major which combines a major in history education with a major in social studies, international relations, political science, economics, anthropology, sociology, or history. The student must consult with the history education advisor about these requirements.

## Bachelor of Science in Mathematics Education: Grades 7-12

### Lower Division Preparation

Trigonometry, Analytic Geometry, Calculus (through MAC 3313 or equivalent). To qualify for admission to the program, FIU undergraduates must have met all the lower division requirements including CLAST, completed 60 semester hours, and must be otherwise acceptable into the program.

**Upper Division Program:** (65)

**Subject Matter Specialization:** (30)

Thirty semester hours beyond calculus (MAC 3413 or equivalent), including at least six semester hours in probability

and statistics, and three semester hours in computer science and geometry.

**Professional Education:** (35)

| | | |
|---|---|---|
| EDF 3723 | Schooling in America | 3 |
| EDG 3321 | General Teaching Laboratory I | 3 |
| EDG 3321L | Laboratory | 2 |
| EDG 3322 | General Teaching Laboratory II | 3 |
| EDP 3004 | Introduction to Educational Psychology | 3 |
| EDF 3521 | Education in History or | |
| EDF 3542 | Philosophy of Education | 3 |

**Reading Requirement**

| | | |
|---|---|---|
| RED 4325 | Special Teaching Laboratory: Reading | 3 |

**Special Methods and Student Taaching**

A student must complete six semester hours of foundations courses and all core courses before enrolling in 4000-level special methods courses. A student must enroll for MAE 4333C and MAE 4942 in consecutive semesters.

| | | |
|---|---|---|
| MAE 4333C | Special Teaching Laboratory: Mathematics | 3 |

Prerequisite or corequisite of 24 hours required in subject matter specialization, including MTG 3212, STA 3321 and STA 3322, COP 3112, or approved substitutes; permission of Instructor required

| | | |
|---|---|---|
| MAE 4942 | Student Teaching | 9 |
| MAE 5648 | Computers in Mathematics Education | 3 |

## Bachelor of Science in Modern Language Education: Grades 7-12

### Lower Division Preparation

Four semesters of elementary and intermediate modern language (may be waived at the discretion of the advisor for native speakers of the target language).

To qualify for admission to the program, FIU undergraduates must have met all the lower division requirements including CLAST, completed 60 semester hours, and must be otherwise acceptable into the program.

**Upper Division Program:** (62)

**Subject Matter Specialization:** (30)

| | |
|---|---|
| Phonetics or Contrastive Phonology | 3 |
| Introduction to Linguistics or Linguistics in Target Language | 3 |
| Civilization | 3 |
| Syntax/Composition | 3 |
| Literature in Target Language | 6 |
| MOL Electives | 12 |

**Professional Education:** (32)

| | | |
|---|---|---|
| EDF 3723 | Schooling in America | 3 |
| EDG 3321 | General Teaching Laboratory I | 3 |
| EDG 3321L | Laboratory | 2 |
| EDG 3322 | General Teaching Laboratory II | 3 |
| EDP 3004 | Introduction to Educational Psychology | 3 |
| EDF 3521 | Education in History or | |
| EDF 3542 | Philosophy of Education | 3 |

**Reading Requirement**

| | | |
|---|---|---|
| RED 4325 | Special Teaching Laboratory: Reading | 3 |

**Special Methods and Student Teaching**

A student must complete the six semester hours of foundations courses and all core courses before enrolling in 4000-level special methods courses. A student must enroll for FLE 4375 and FLE 4942 in consecutive semesters.

| | | |
|---|---|---|
| FLE 4375 | Special Teaching Laboratory: Modern Languages | 3 |

Prerequisite or corequisite of 20 hours required in subject matter specialization.

| | | |
|---|---|---|
| FLE 4942 | Student Teaching | 9 |

**Approved Electives**

Sufficient number of hours to accrue to a total of 62 semester hours at the University.

## Bachelor of Science in Music Education: Grades 1-12

### Lower Division Preparation

An Associate in Arts Degree in Music or the following recommended courses: applied, four semesters; history, four semester hours; organizations, four semesters; techniques secondary instruments, four semester hours; theory, 12 semester hours; sight-singing, four semester hours; class piano, four semesters.

To qualify for admission to the program, FIU undergraduates must have met all the lower division requirements including CLAST, completed 60 semester hours, and must be otherwise acceptable into the program.

**Upper Division Program:** (76)

**Subject Matter Specialization:** (38)

| | |
|---|---|
| Applied Music (Four semester-hours lessons on major instrument each semester) | 8 |
| Basic Conducting | 1 |
| Instrumental or Choral | 1 |
| Form and Analysis | 3 |
| Counterpoint | 3 |
| Guitar | 1 |
| Music History Survey I | 3 |
| Music History Survey II | 3 |
| Twentieth Century Music History | 3 |
| Orchestration | 3 |
| Organizations (2 each semester) | 8 |
| Research and Recital | 1 |

**Professional Education:** (38)

| | | |
|---|---|---|
| EDF 3723 | Schooling in America | 3 |
| EDG 3321 | General Teaching Laboratory I | 3 |
| EDG 3321L | Laboratory | 2 |
| EDG 3322 | General Teaching Laboratory II | 3 |
| EDP 3004 | Introduction to Educational Psychology | 3 |
| EDF 3521 | Education in History or | |
| EDF 3542 | Philosophy of Education | 3 |

**Reading Requirement**

| | | |
|---|---|---|
| RED 4325 | Special Teaching Laboratory; Reading | 3 |

**Special Methods and Student Teaching**

A student must complete the six semester hours of foundations courses and all core courses before enrolling in 4000-level special methods courses.

| | | |
|---|---|---|
| MUE 3332 | Special Teaching Laboratory I: Music | 3 |
| MUE 4341 | Special Teaching Laboratory II: Music (K-12) | 3 |

Prerequisite or corequisite of 20 hours required in subject matter specialization.

| | | |
|---|---|---|
| MUE 4940 | Student Teaching (Elementary and Secondary) | 12 |

## Bachelor of Science in Physics Education: Grades 7-12

### Lower Division Preparation

Eight semester hours of general physics; eight semester hours of general chemistry, mathematics through calculus II.

*Note:* Linear Algebra is a prerequisite for multivariable calculus.

To qualify for admission to the program, FIU undergraduates must have met all the lower division requirements including CLAST, completed 60 semester hours, and must be otherwise acceptable into the program.

**Upper Division Program:** (64)

**Subject Matter Specialization:** (30)

| | |
|---|---|
| Physics with Calculus | 10 |
| Physics Laboratories | 2 |
| Modern Physics | 6 |
| Electives in Physics[1] | 9 |
| Multivariable Calculus | 3 |

**Professional Education:** (32)

| | | |
|---|---|---|
| EDF 3723 | Schooling in America | 3 |
| EDG 3321 | General Teaching Laboratory I | 3 |
| EDG 3321L | Laboratory | 2 |
| EDG 3322 | General Teaching Laboratory II | 3 |
| EDP 3004 | Introduction to Educational Psychology | 3 |
| EDF 3521 | Education in History or | 3 |
| EDF 3542 | Philosophy of Education | 3 |

**Reading Requirement**

| | | |
|---|---|---|
| RED 4325 | Special Teaching Laboratory: Reading | 3 |

**Special Methods and Student Teaching**

A student must complete six hours of foundations courses and all core courses before enrolling in 4000-level special methods courses. A student must enroll for SCE 4330 and SCE 4944 in consecutive semesters.

Prerequisite or corequisite of 20 hours required in subject matter specialization.

| | | |
|---|---|---|
| SCE 4330 | Special Teaching Laboratory: Science | 3 |
| SCE 4944 | Student Teaching | 9 |

Advisor Approved Electives

[1]Sufficient electives to complete 30 semester hours of upper division physics.

## Bachelor of Science in Social Studies Education: Grades 7-12

### Lower Division Preparation

Two courses in history and one course in the social sciences beyond freshman social science core (select from anthropology, economics, geography, political science, or sociology).

To qualify for admission to the program, FIU undergraduates must have met all the lower division requirements including CLAST, completed 60 semester hours, and must be otherwise acceptable into the program.

**Upper Division Program:** (65)

**Subject Matter Specialization:** (30)

| | | |
|---|---|---|
| History | | 9 |
| United States Government | | 3 |
| GEA 3000 Geography | | 3 |
| Economics | | 3 |
| Anthropology or Sociology | | 3 |
| SSE 4380 | Global Perspectives | 3 |
| Advisor Approved Electives | | 6 |

**Professional Education:** (35)

| | | |
|---|---|---|
| EDP 3004 | Introduction to Educational Psychology | 3 |
| EDF 3521 | Education in History or | |
| EDF 3542 | Philosophy of Education | 3 |
| EDF 3723 | Schooling in America | 3 |
| EDG 3321 | General Teaching Laboratory I Basic Teaching Skills | 3 |
| EDG 3321L | Laboratory | 2 |
| EDG 3322 | General Teaching Laboratory II Human Relations Skills | 3 |

**Reading Requirement**

| | | |
|---|---|---|
| RED 4325 | Special Teaching Laboratory: Reading | 3 |

**Special Methods and Student Teaching**

A student must complete six semester hours of foundation courses, and all core courses before enrolling in 4000-level special methods courses. A student must enroll for SSE 4384C and SSE 4942 in consecutive semesters.

| | | |
|---|---|---|
| SSE 4384C | Special Teaching Laboratory: Social Studies | 3 |
| SSE 4942 | Student Teaching | 12 |

A minimum of 39 semester hours at the lower and upper divisions combined must be completed in the social studies subject matter specialization for certification. Electives must include sufficient semester hours in United States history (6), history other than United States (9), political science (6), geography (6), economics (6), anthropology (3), and sociology (3) to meet social studies certification requirements. It is recommended that the student considers a double major which combines a major in social studies with a major in history, history education, international relations, political science, economics, anthropology, or sociology. The student must consult with the social studies advisor about these requirements.

## Bachelor of Science in Vocational Home Economics Education

### Lower Division Preparation

The student is required to have 39 semester hours in the areas listed below under Technical Preparation for certification. These may be earned in courses in both the lower and upper divisions. It is recommended that students take at least one basic course in each of the subject areas (Technical Preparation), if these are available at the lower division level.

To qualify for admission to the program, FIU undergraduates must have met all the lower division requirements including CLAST, completed 60 semester hours, and must be otherwise acceptable into the program.

**Upper Division Program:** (60)

**Professional Education:** (41)

| | | |
|---|---|---|
| EDP 3004 | Introduction to Educational Psychology | 3 |
| EDF 3521 | Education in History or | |
| EDF 3542 | Philosophy of Education | 3 |
| EDF 3723 | Schooling in America | 3 |
| EDG 3321 | General Teaching Laboratory I Basic Teaching Skills | 3 |
| EDG 3321L | Laboratory | 2 |
| EDG 3322 | General Teaching Laboratory II Human Relations Skills | 3 |
| EME 3402 | Computers for Teachers | 3 |
| RED 4325 | Special Teaching Lab: Reading | 3 |
| HEE 3302 | Home Economics Educational Planning | 3 |
| HEE 4104 | Instruction in Vocational Home Economics | 3 |
| HEE 4944 | Special Teaching Laboratory: Home Economics Education | 3 |
| HEE 4941 | Student Teaching: Home Economics Education | 9 |

**Technical Preparation**

| | |
|---|---|
| Total of 39 semester hours needed from lower and upper divisions: | 39 |
| Housing and Home Furnishings[1] | 6 |
| Management and Family Economics[1] | 6 |
| Family and Child Development[1] | 9 |
| Food and Nutrition[1] | 9 |
| Textiles and Clothing[1] | 9 |

[1]Technical preparation courses are offered in the Colleges of Education, Arts and Sciences, Engineering and Applied Sciences, Health, and the School of Hospitality Management.

## Bachelor of Science in Vocational Industrial Education

### Lower Division Preparation

Evidence of appropriate occupational experience must be presented prior to being admitted to the Vocational Industrial Education Bachelor of Science degree program.

To qualify for admission to the program, FIU undergraduates must have met all the lower division requirements including CLAST, completed 60 semester hours, and must be otherwise acceptable into the program.

**Upper Division Program:** (60)

**Professional Education:** (56-62)

| | | |
|---|---|---|
| EDP 3004 | Introduction to Educational Psychology | 3 |
| EDF 3521 | Education in History or | |

| | | |
|---|---|---|
| EDF 3542 | Philosophy of Education | 3 |
| EDF 3723 | Schooling in America | 3 |
| EDG 3321 | General Teaching Laboratory I: Basic Teaching Skills | 3 |
| EDG 3321L | General Teaching Laboratory I: Laboratory | 2 |
| EDG 3322 | General Teaching Laboratory II: Human Relations Skills | 3 |
| EME 3402 | Computers for Teachers | 3 |
| RED 4325 | Special Teaching Laboratory: Reading | 3 |
| EVT 3065 | Foundations of Vocational Education | 3 |
| EVT 3161 | Instructional Materials in Vocational Industrial Education | 3 |
| EVT 3165C | Course Planning in Vocational Education | 3 |
| EVT 3367 | Testing and Measurements in Vocational Education Subjects | 3 |
| EVT 3815C | Vocational Education Laboratory Management and Safety | 3 |
| EVT 4502 | Introduction to Vocational Special Needs | 3 |
| EVT 4940 | Special Teaching Laboratory: Vocational Industrial Education | 3 |
| EVT 4941 | Student Teaching Vocational Industrial Education | 9 |
| EVT 5369 | Vocational Educational Media | 3 |
| EVT 4949 | Supervised Occupational Experience | 3-9 |

**Advised Electives:** (6)

| | | |
|---|---|---|
| SYP 4421 | Man, Society, and Technology | |
| | or | |
| SYO 4360 | Industrial Sociology | 3 |
| | or | |
| INP 3001 | Industrial Psychology | |
| | or | |

Appropriate course taken in consultation with the program advisor

**Electives**

Enough electives should be taken to equal a minimum of 60 semester hours.

## Business Teacher Education Track

### Lower Division Preparation

Required Technical Preparation: Business machines, advanced courses in typewriting, word processing, shorthand, and office practice or secretarial procedures. Students should complete as much of the following as possible at the community college or its equivalent course work from another four-year college or university with the remainder to be taken at the University: Six semester hours in accounting, six semester hours in economics, three semester hours in business English, and three semester hours of business law, and three semester hours in computer science.

To qualify for admission to the program, FIU undergraduates must have met all the lower division requirements including CLAST, completed 60 semester hours, and must be otherwise acceptable into the program.

**Upper Division Program:** (65-74)

**Professional Education:** (47-56)

| | | |
|---|---|---|
| EDP 3004 | Introduction to Educational Psychology | 3 |
| EDF 3521 | Education in History | 3 |
| | or | |
| EDF 3542 | Philosophy of Education | |
| EDF 3723 | Schooling in America | 3 |
| EDG 3321 | General Teaching Laboratory I: Basic Teaching Skills | 3 |
| EDG 3321L | General Teaching Laboratory I: Laboratory | 2 |
| EDG 3322 | General Teaching Laboratory II: Human Relations Skills | 3 |
| EME 3402 | Computers for Teachers | 3 |
| RED 4325 | Special Teaching Laboratory: Reading | 3 |
| EVT 3065 | Foundations of Vocational Education | 3 |
| BTE 3068 | Principles of Business Education | 3 |
| BTE 4410 | Special Teaching Lab: Business Education Non-Skills | 3 |
| BTE 4401 | Special Teaching Lab: Business Education Skills | 3 |
| BTE 4944 | Special Teaching Lab: Business Education Practicum | 3 |
| BTE 4945 | Student Teaching in Business Education | 9 |
| EVT 4949 | Supervised Occupational Experience[1] | 3-9 |

[1]To be a certified vocational business teacher, one must have one year (or its equivalent) of office work experience. Supporting letters from former employers are required. EVT 4949 may be taken to meet the work experience requirement.

**Business Administration:** (12)

Recommended Courses

| | | |
|---|---|---|
| MAN 3025 | Organization and Management | 3 |
| MAN 3023 | Marketing Management | 3 |

**Advised Electives**

Six semester hours in Business Administration selected in consultation with program advisor. 6

**Electives**

Electives are recommended either in the College of Education or the College of Business Administration, and in consultation with the program advisor. 6

## Health Occupations Education Track

### Lower Division Preparation

**Required Technical Preparation**

Occupational preparation in the student's intended area of teaching such as nursing, dental, medical technology, respiratory therapy, radiology technology, and other allied health related occupations requiring training beyond the secondary school and licensure in the occupational area when applicable.

To qualify for admission to the program, FIU undergraduates must have met all the lower division requirements including CLAST, completed 60 semester hours, and must be otherwise acceptable into the program.

**Upper Division Program:** (62-71)

**Professional Education:** (32-41)

| | | |
|---|---|---|
| EDP 3004 | Introduction to Educational Psychology | 3 |
| EDF 3521 | Education in History | 3 |
| | or | |
| EDF 3542 | Philosophy of Education | |
| EDF 3723 | Schooling in America | 3 |
| EDG 3321 | General Teaching Lab I: Basic Teaching Skills | 3 |
| EDG 3321L | General Teaching Laboratory I: Laboratory | 2 |
| EDG 3322 | General Teaching Laboratory II: Human Relations Skills | 3 |
| EME 3402 | Computers for Teachers | 3 |
| RED 4325 | Special Teaching Laboratory: Reading | 3 |
| EVT 3065 | Foundations of Vocational Education | 3 |
| | or | |
| EVT 5078 | Technical Education in American Society | |
| EVT 3165C | Course Planning in Vocational Education | 3 |
| EVT 3367 | Tests and Measurements in Vocational Education | 3 |
| EVT 4949 | Supervised Occupational Experience[1] | 3-9 |

[1]For the student who lacks acceptable occupational experience in the area to be taught. Not to be counted in the up-

per division 60 hours minimum required for graduation.

**Specialization Area Requirements:** (18)

| | | |
|---|---|---|
| EVT 4310 | Planning and Operating HOE Programs | 3 |
| EVT 4311C | Special Teaching Laboratory | 3 |
| EVT 4312 | Instructional Strategies and Evaluation in HOE Programs | 3 |
| EVT 4941 | Student Teaching in Health Occupations Education Programs | 9 |

Electives should be taken to equal a minimum of 60 semester hours.

## Technology Education Track

### Lower Division Preparation

#### Required Technical Preparation

With reference to the technical preparation outlined below, the student is encouraged to take basic courses in each area in the lower division. College algebra and physics are required prerequisites.

To qualify for admission to the program, FIU undergraduates must have met all the lower division requirements including CLAST, completed 60 semester hours, and must be otherwise acceptable into the program.

**Upper Division Program:** (65)

**Professional Education:** (35)

| | | |
|---|---|---|
| EDP 3004 | Introduction to Educational Psychology | 3 |
| EDF 3521 | Education in History | |
| | or | |
| EDF 3542 | Philosophy of Education | 3 |
| EDF 3723 | Schooling in America | 3 |
| EDG 3321 | General Teaching Laboratory I: Basic Teaching Skills | 3 |
| EDG 3321L | General Teaching Laboratory I: Laboratory | 2 |
| EDG 3322 | General Teaching Laboratory II: Human Relations Skills | 3 |
| RED 4325 | Special Teaching Laboratory: Reading | 3 |
| EVT 3165C | Course Planning in Vocational Education | 3 |
| EIA 4360 | Instruction in Technology Education | 3 |
| EIA 4941 | Student Teaching: Technology Education | 9 |

#### Advised Electives

The candidate will be encouraged to select professional electives on the basis of individual needs and career goals for a total of 35 semester hours of professional education.

**Technical Preparation:** (30)

**Required**

A minimum of 30 semester hours are required, with a minimum of six semester hours in each of the following four areas:

**Construction Technology**

| | | |
|---|---|---|
| BCN 3210 | Construction Materials | 3 |
| BCN 3240L | Construction Methods and Equipment | 3 |
| BCN 4254C | Building Construction Drawing | 3 |
| ARC 3210 | Architectural Concepts of Construction | 3 |
| ARC 3466 | Methods and Materials of Construction | 3 |

**Manufacturing Technology**

| | | |
|---|---|---|
| EIN 1396 | Basic Industrial Shop and Manufacturing Practices | 3 |
| EIN 3390 | Manufacturing Processes | 3 |
| ARC 3127 | Graphic Communications | 3 |
| EIN 3600 | Introduction to Robotics | 3 |
| ETI 4421 | Materials Processing | 3 |
| ESI 3161 | Industrial Applications of Microprocessors | 3 |

**Graphic Communications Technology**

| | | |
|---|---|---|
| EGN 3123 | Computer Assisted Drawing and Design | 3 |
| ARC 3127 | Graphic Communications | 3 |
| EGS 1110 | Engineering Drawing | 3 |

## Organizational Training Track

The Organizational Training track prepares individuals to become professional trainers and instructors in non-public school settings. The track includes coursework appropriate to organizational training and has two options: (1) a 24 semester hour professional certificate program and (2) a baccalaureate degree. Both options require an internship experience in an industrial, business, public, or private organization setting. Admission to the track is open to experienced workers in industry, business, public or private organizations or agencies who hold an Associate in Arts degree or its equivalent.

This track does not lead to State of Florida Teacher Certification.

### Lower Division Preparation

#### Required Technical Preparation

Technical preparation in the student's intended area of teaching.

To qualify for admission to the program, FIU undergraduates must have met all the lower division requirements including CLAST, completed 60 semester hours, and must be otherwise acceptable into the program.

**Upper Division Preparation:** (60)

**Professional Education:** (18)

| | | |
|---|---|---|
| EDF 3542 | Philosophy of Education | 3 |
| ENC 3210 | Technical Writing | 3 |
| EME 4103 | Production and Use of AV/Media | 3 |
| EME 3402 | Computers for Teachers | 3 |
| EDP 3004 | Educational Psychology | 3 |
| RED 4325 | Special Teaching Laboratory: Reading | 3 |

**Professional Emphasis:** (39)

| | | |
|---|---|---|
| ADE 4384 | The Adult Learner | 3 |
| ADE 4284 | Organizational Training and Development | 3 |
| EVT 3165 | Course Planning | 3 |
| EVT 3367 | Testing and Measurement in Vocational Educational Subjects | 3 |
| EVT 4365 | Instructional Strategies and Evaluation in Vocational and Technical Education | 3 |
| EVT 4365L | Instructional Laboratory | 3 |
| EVT 4920 | Group Training and Development | 3 |
| EVT 4931 | Special Topics | 3 |
| EVT 4942 | Internship: Training and Development | 6 |
| EVT 4949 | Supervised Occupational Experience | 9 |
| | or | |
| EVT 4990 | Credit by Examination | |

**Advised Electives:** (3)

An appropriate course taken in consultation with the program advisor.

## Post-Secondary Technical Education Track

### Lower Division Preparation

#### Required Technical Preparation

Technical preparation in the student's intended area of teaching such as electronics technology, architectural technology, commercial art, electronic data processing, electro-mechanical technology, and other occupations requiring training beyond the twelfth grade or demonstration of competency via EVT 4990 listed below.

To qualify for admission to the program, FIU undergraduates must have met all the lower division requirements including CLAST, completed 60 semester hours, and must be otherwise acceptable into the program.

**Upper Division Program:** (60)

**Professional Education:** (50-56)

| | | |
|---|---|---|
| EDP 3004 | Introduction to Educational Psychology | 3 |
| EDF 3521 | Education in History | |

| | | |
|---|---|---|
| | or | |
| EDF 3542 | Philosophy of Education | 3 |
| EDF 3723 | Schooling in America | 3 |
| EVT 5078 | Technical Education in American Society | 3 |
| EDG 3321 | General Teaching Laboratory I: Basic Teaching Skills | 3 |
| EDG 3321L | General Teaching Laboratory I: Laboratory | 2 |
| ADE 5385 | Adult Teaching and Learning | 3 |
| EDG 3322 | General Teaching Laboratory II Human Relations Skills | 3 |
| EME 3402 | Computers for Teachers | 3 |
| RED 4325 | Special Teaching Laboratory: Reading | 3 |
| EVT 3165C | Course Planning in Vocational Education | 3 |
| EVT 4949 | Supervised Occupational Experience[1] | 3-9 |
| | or | |
| EVT 4990 | Credit by Examination | 3-9 |
| EVT 5369 | Educational Media | 3 |
| EVT 4940 | Special Teaching Laboratory Technical Education | 3 |
| EVT 4941 | Student Teaching: Technical Education | 9 |

[1]For the student who lacks acceptable occupational experience in the area to be taught.

**Advised Electives:** (6)

**Free electives**

Enough upper division electives should be taken in consultation with the program advisor to equal a minimum of 60 semester hours.

### Professional Certificate in Organizational Training

This 24 semester hour professional certificate program is designed to prepare experienced workers to serve in a variety of education, training, and development settings in industry and business as well as public and private agencies and organizations. These settings include three types of training: skills and technical, management, and motivational; and four specific training and development job roles: instructor, media producer, instructional designer, and organizational developer. An internship in training and development in a business, industrial, agency or organization setting is required.

**Required Program:** (24)

| | | |
|---|---|---|
| ADE 4284 | Organizational Training and Development | 3 |
| EME 3402 | Computers for Teachers | 3 |
| EME 4103 | Production and Use of A/V Media | 3 |
| EVT 3165 | Course Construction | 3 |
| EVT 4365 | Instructional Strategies | 3 |
| EVT 4365L | Instructional Laboratory | 3 |
| EVT 4942C | Internship: Training and Development | 6 |

A minimum of two years occupational experience and an associate degree or its equivalent is required for admission.

This program does not lead to State of Florida Teacher Certification. Admission to this program does not require teacher certification.

### Program for Vocational-Technical Teacher Education Certification

The certificate program in Vocational-Technical Teacher Education is currently under revision. State Teacher Certification requirements have not been finalized at press time. Please consult with a program advisor for further information about this program.

Special programs of vocational teacher certification, designed in cooperation with local school districts, are offered on an annual basis. Please consult with a program advisor for further information.

### Program for Advanced Vocational Teacher Certification

Certification rules have not been finalized at press time. It is anticipated that the Advanced designation will be available for the Professional Certificate-Vocational. Please consult an advisor for further information.

## Urban, Multicultural and Community Education

**Robert V. Farrell,** *Associate Professor and Chairperson, Educational Foundations*

**John A. Carpenter,** *Professor, Educational Foundations and International Development Education*

**Joseph B. Cook,** *Professor, Community College Teaching*

**I. Ira Goldenberg,** *Professor and Dean, Educational Foundations*

**Chris Uber Grosse,** *Assistant Professor, TESOL*

**E. Joseph Kaplan,** *Assistant Professor, Educational Foundations*

**Colleen A. Ryan,** *Associate Professor, Special Education for the Emotionally Handicapped*

The Department of Urban, Multicultural and Community Education is located at the North Miami Campus. It has three graduate programs that are discussed in the Graduate Catalog. In terms of undergraduate education, this Department coordinates the educational foundations courses and Core courses that are part of the common preparation of undergraduate teacher education majors at FIU.

The foundations courses include Sociology, Philosophy and History of Education:

| | |
|---|---|
| EDF 3723 | Schooling in America |
| EDF 3542 | Philosophy of Education |
| EDF 3521 | Education in History |

The Core courses include two general methods courses:

| | |
|---|---|
| EDG 3321 | General Teaching Lab I with Lab EDG 3321L |
| EDG 3322 | General Teaching Lab II |

In terms of the mission of the College, this Department has the goal of infusing urban, multicultural and international concepts into all programmatic offerings. This goal is being implemented through the Department's Urban Education Program and the Peace Corps/USA Fellows Program. The goal of infusing the above conceptual bases into individual courses across the College is a Departmental priority.

### Course Descriptions

**Definition of Prefixes**

ADE - Adult Education; ARE - Art Education; BTE - Business Teacher Education; CGS - Computer Applications; CHD - Child Development; COA - Consumer Affairs; DAA - Dance Activities; DAE - Dance Education; EDA - Education: Educational Leadership; EDE - Education: Elementary; EDF - Education: Foundations; EDG - Education: General; EDH - Education - Higher; EDP - Education: Psychology; EDS - Education: Supervision; EEC - Education: Early Childhood; EED - Education: Emotional Disorders; EEX - Education: Exceptional Child, Core Competencies; EGC - Education: Guidance and Counseling; EGI - Education: Exceptional Child, Gifted; EIA - Education: Industrial Arts; ELD - Education: Specific Learning Disabilities; EME - Education: Technology and Media; EMR - Education: Mental Retardation; ESE - Education Secondary; ETE - Engineering Technology: Electrical; ETM - Engineering Technology: Mechanical; EVT - Education:

Vocational Technical; FAD - Family Development; FLE - Foreign Language Education; HEE - Home Economics Education; HHD - Housing; HLP - Health, Leisure, and Physical Education; HME - Home Management Equipment; HOE - Home Economics; LAE - Language Arts and English Education; LEI - Leisure; MAE - Mathematics Education; MUE - Music Education; PEL - Physical Education; PEM - Physical Education Activities; PEO - Physical Education Activities; PEP - Physical Education Activities; PEQ - Physical Education Professional Water; PET - Physical Education Therapy; RED - Reading Education; SCE - Science Education; SPA - Speech Pathology and Audiology; SPS - School Psychology; SSE - Social Studies Education; TSL - TESOL.

**ADE 4284 Organizational Training and Development (3).** Describes role of employee training/development in a variety of organizations. History/current trends and issues/future directions noted. Training and development in specific organizations emphasized.

**ADE 4384 The Adult Learner (3).** Identifies the characteristics and evolving development of adults. Reviews the primary learning theories and analyzes those most applicable for adults as learners.

**ADE 5081 Introduction to Adult Education and Human Resource Development (3).** Developing rationale for and philosophy of human resource development/adult education: contrasting agencies, program, and curricula; analyzing factors affecting human resource development, differentiating adults and youths as learners; planning and appraising human resource development programs.

**ADE 5180 Organizational and Community Processes in AE/HRD (3).** Analyzing human resource and community development programs, the processes and implemental strategies; needs assessment objectives, curricula, recruitment, implementation, and evaluation.

**ADE 5195 Designing Education and HRD Programs for Disadvantaged Adults (3).** Distinguishing various forms of disadvantage; analyzing forces which inhibit solution; criticizing responses to problems; developing programs, curricula materials, recruitment strategies, and evaluation designs.

**ADE 5260 Organization and Administration of Adult Education and Human Resource Development Programs (3).** Analyzing regulations affecting adult education/human resource development, selecting and training staff; selecting organizational patterns; executing managerial responsibilities; administering supportive services; relating training to organization development.

**ADE 5383 Instructional Processes in AE/HRD (3).** Analyzing models for instructional design; identifying and evaluating variables related to such models; developing designs unique for adult learners and organizational needs.

**ADE 5385 Adult Teaching and Learning (3).** Differentiating theories of learning in relation to teaching adults; contrasting characteristics of adults as opposed to youth; evaluating the implications of such distinctions in relation to learning situations appropriate for adults.

**ADE 5906 Individual Study in Adult Education and Human Resource Development (1-3).** Specialized intensive study in areas of interest to the student. Subject to approval of program adviser.

**ADE 5925 Workshop in Adult Education and Human Resource Department (1-6).** Intensive development of selected competencies related to instructional, curricular and/or administrative skills of special interest to students in adult education/human resource development.

**ADE 5935 Special Topics in Adult Education and Human Resource Development (1).** 'Mini-courses' which provide for an examination of special facets of adult education and human resource development.

**ADE 5945 Supervised Field Experience in Adult Education and Human Resource Development (1-6).** Internship in various programs according to needs and interests. Supervisory visits by advisor. Joint conferences and seminars involving the student, the program advisor, and an appropriate representative of the cooperating agency are conducted intermittently.

**ARE 3313 Teaching Elementary Art (3).** Designed to provide the student with competencies necessary for the development and implementation of art experiences in the elementary curriculum. Prerequisite: For Education majors only, EDG 3321, EDG 3321L. Corequisite: EDE 4940, EDE 4941 or EDE 4942.

**ARE 4316 Special Teaching Laboratory: Art in Grades K-6 (3).** Development of instructional skills, techniques, and strategies for teaching art in the elementary school. Laboratory and field participation required. Prerequisites: EDF 3723, EDG 3321, EDG 3322, EDP 3004. Either EDF 3521 or EDF 3542. Minimum prerequisite or corequisite of 20 hours required in subject matter specialization.

**ARE 4341 Special Teaching Laboratory: Art in Grades 7-12 (3).** Development of instructional skills, techniques, and strategies for teaching art in the junior and senior high school. Laboratory and field participation required. Prerequisites: EDF 3723, EDG 3321, EDG 3322; ARE 4316. Minimum prerequisite or corequisite of 20 hours required in subject matter specialization.

**ARE 4940 Student Teaching in Art (9).** Supervised teaching in an elementary and secondary school. Prerequisites: EDF 3723, EDG 3321, EDG 3322; ARE 4316, 4341; RED 4325, and 18 semester hours of the course work required in art.

**ARE 5251 Art for the Exceptional Child (3).** Development of instructional art skills, techniques, and strategies as related to the exceptional child. Observation and field participation required.

**ARE 5553 Introduction to Art Therapy (3).** An overview of art therapy as a verbal and nonverbal means of communication with special emphasis on psychodynamic fundamentals inherent to the process for the purpose of diagnosis, treatment, and intervention for people with special needs.

**ARE 5905 Directed Study in Art Education (1-3).** Individual investigation and research in one or more areas of art education. Prerequisite: Consent of professor.

**ARE 5945 Practicum: Art Education (6).** Supervised teaching in a junior or senior high school. Prerequisites: Admission to the Alternate Track Program and completion of prerequisite coursework in education and subject matter area. Supervised teaching in an elementary or secondary school.

**BTE 3068 Principles of Business Education (3).** Competency: A knowledge of basic philosophies, principles, practices, trends, and objectives in Business Education.

**BTE 4401 Special Teaching Lab: Business Education Skills (3).** Competency: Knowledge and application of instructional principles, methods, techniques and practices to the teaching for office careers to include office simulation and cooperative business education. Prerequisites: BTE 3068 and professional education core concurrent with BTE 4944.

**BTE 4410 Special Teaching Lab: Business Education Non-Skills (3).** Competency: Knowledge and application of instructional principles, methods, techniques, and practices to the teaching of accounting, bookkeeping, and basic business and economic education courses. Prerequisites: BTE 3068 and professional education core concurrent with BTE 4944.

**BTE 4944 Special Teaching Lab: Business Education Practicum (1-3).** Competency: Application of methods of teaching in business and office occupations in selected institutions and knowledge of educational institutions. Prerequisites: BTE 3068 and professional education core concurrent with BTE 4410 and BTE 4401.

**BTE 4945 Student Teaching in Business Education (9).** Competency: Competencies developed in the utilization of instructional knowledge, attitudes, and skills in business education instructional situations. Prerequisites: BTE 3068, 4360, 4364 and 4944; professional education core.

**BTE 5447 Teaching Basic Business and Consumer Education (3).** Competency: Knowledge of current and evolving methods, techniques and practices to teach and evaluate basic business and consumer education programs. Prerequisite: Graduate Standing.

**BTE 5455 Teaching in Business Education Occupational Programs (3).** Competency: Knowledge of current and evolving methods, techniques and practices to teach and evaluate office education programs to include office simulation and cooperative business education.

**BTE 5671 Problems, Issues and Trends in Business Education (3).** Competency: Historical information, issues, current trends, new dimensions and problems in business education. Prerequisite: Graduate standing.

**CHD 3220 Child Development: Infancy and Early Childhood (3).** Systematic study of total developmental process in the child from conception through early childhood emphasizing the effects of home and family environment. Includes observational experiences.

**CHD 4210 Middle Childhood and Adolescent Development (3).** Extension of the study of developmental patterns of children, with emphasis on physical, intellectual, social, and emotional maturation through adolescence. Analysis of environmental and home influences.

**CHD 4930 Seminar in Child Development (3).** Study of current issues and trends in child development and the professional role of the home economics developmental specialist.

**CHD 5264 Advanced Studies in Child Development (3).** Survey of current literature on selected areas, analysis of trends and issues, and investigation of recent research in Child Development. Prerequisites: CHD 3220, CHD 4210 or equivalent.

**CGS 5410 Logo for Educators (3).** Aspects of Logo as used by educators. Creative aspects, the language, philosophy, structure, and application. Prerequisite: Computers in Classroom or equivalent.

**CGS 5413 PILOT for Educators (3).** Authoring language PILOT for teachers. Designed to develop language and its application to all levels of education. Prerequisite: EME 6405 or equivalent.

**DAE 3371 Dance in the Elementary and Middle School (3).** The study of the scope, structure, and sequence of the dance program for grades K-8. Emphasis on educational dance and simple forms of folk and square dance.

**DAE 4362 Dance in the Middle and Secondary School (3).** Includes content and methods for teaching dance in grades 6-12. Emphasis on structured multi-cultural dance forms including folk and square dance, social dance, and country-western dance. Prerequisite: Dance activity class from lower division.

**EDE 4451 Evaluation in Elementary Education (3).** Designed to provide the Elementary Education pre-service teacher with knowledge and practical approaches to evaluation in the elementary school. For Elementary Education majors only. Prerequisites: EDG 3321, EDG 3321L. Corequisite: EDE 4940, EDE 4941 or EDE 4942.

**EDE 4936 Senior Seminar in Elementary Education (3).** A seminar designed for student teachers covering topics related to classroom management, discipline, school community relations, professional problems and issues. Corequisite: EDE 4943.

**EDE 4940 Field Experience: Elementary Education (1).** Fall experience in observing and performing tasks in a public school elementary classroom. For Education majors only.

**EDE 4941 Field Experience: Elementary Education (1).** Spring experience in observing and performing tasks in a public school elementary classroom. For Education majors only.

**EDE 4942 Field Experience: Elementary Education (1).** Summer experience in observing and performing tasks in a public school elementary classroom. For Education only.

**EDE 4943 Student Teaching Internship (12).** A field experience in an elementary school where the student serves as a teacher associate, demonstrating competencies acquired throughout the program. For Education majors only.

**EDE 5267 Education of the Child in Urban Society (3).** For students desiring advanced study in the schooling of inner-city pupils in K-6. Prerequisites: EDF 3723, EDG 3321, EDG 3322.

**EDE 5905 Individual Study in Elementary Education (1-3).** Individual investigation in the area of instruction in elementary education. Permission of instructor required.

**EDE 5925 Workshop in Elementary Education (3).** An opportunity for teachers to continue to develop competency in a specified area under the guidance of a specialist in selected fields in elementary education. Permission of instructor required.

**EDF 2930 Teaching as a Profession (3).** An introductory seminar to introduce students to the opportunities available in the teaching profession.

**EDF 3521 Education in History (3).** An examination of the concepts of childhood, and processes of social initiation in differing historical contexts.

**EDF 3542 Philosophy of Education (3).** Concepts of philosophy and education will be applied in the review of prominent philosophies of education. Special attention will be given to the development of the student's own philosophy of education and to the importance of philosophical assumptions in curriculum designs and teaching strategies.

**EDF 3723 Schooling in America (3).** Systematic analysis and examination of critical educational issues in terms of their influence and impact on curriculum and instruction in contemporary schooling.

**EDF 4881 The Teacher and the Law (3).** For advanced undergraduates and beginning teachers. Analysis of legal rights and responsibilities in the classroom, laws related to liability, contract, records, discipline, due process, handicapped, and schools.

**EDF 5216 Effective Learning in the Classroom (3).** A behavioral approach to effective teaching techniques, including theoretical background, behavioral definitions, writing effective objectives, and evaluation of effective learning in the classroom. A field experience will be included.

**EDF 5287 Instructional Technology: Systems Approach (3).** Development of instructional competencies, with an emphasis on the use of a systems approach in the design, implementation, and evaluation of programs.

**EDF 5432 Measurement and Evaluation in Education (3).** Competencies required for the design, construction or selection, and evaluation of measuring instruments. Prerequisite: EDF 5481.

**EDF 5481 Analysis and Application of Educational Research (3).** Competencies required for the design, implementation, and evaluation of educational research, including: problem formulation and analysis; sample selection; instrument selection; formulation of research design and procedure; and data analysis.

**EDF 5517 History of American Education (3).** An examination of different historical perspectives in the development of American education. Special focus on differing interpretations of school and society relationships.

**EDF 5812 National Educational Systems: A Comparative Analysis (3).** Examination of educational structures and guiding educational objectives in a limited number of both developed and developing countries. Analysis of the responses of national educational systems to common educational issues.

**EDF 5820 Latin American Education: An Historical and Contemporary Overview (3).** Historical and current development of Latin American education, and analysis of the principal forces shaping this development.

**EDF 5821 African Educational Systems: A Comparative Approach (3).** Contemporary trends and issues of education in selected independent African countries, with historical analysis of colonial educational policies and practices.

**EDF 5850 International Development Education: Historical and Contemporary Reality (3).** Designed to explore the relationship between education and the modernization/development process. Special emphasis on historic/contemporary educational planning models.

**EDF 5851 Socio/Cultural Conflict in Educational Change (3).** This course explores radical interpretations of the relationship of education to development in the Third World. Emphasis will be placed on the problem of values conflict and on the use of appropriate educational technologies. Prerequisite: EDF 5850.

**EDF 5852 Educational Development Issues in Context: A Multidisciplinary Perspective (3).** A critical analysis of educational reforms of the past and the present, drawing on social science research and policy issues in the Third World. Prerequisite: EDF 5850.

**EDF 5880 Intercultural Education: National and International Perspectives (3).** Analysis of concepts and programs of intercultural and international education. consideration of the role of education in fostering intercultural understanding both nationally and internationally.

**EDF 5881 Foundations of Bilingual Education (3).** Focus on an understanding of the bases and rationale for bilingual education, including linguistic, psycholinguistic and sociolinguistic; historical legal perspectives. Issues in elementary, secondary, adult, vocational, and special education will also be addressed.

**EDF 5905 Independent Study (1-3).** The student plans and carries out an independent study project under direction. Topics are to directly relate to content of education courses. Independent study may not substitute for regular course offerings. Prerequisites: Written permission of the chairman of the Division and the approval of the instructor.

**EDF 5941 Practicum I in Urban Education (5).** Demonstration of competencies needed by teachers in urban schools. Prerequisite: Current Florida Teaching Certificate.

**EDF 5942 Practicum II in Urban Education (5).** Demonstration of competencies needed by teachers in urban schools. Prerequisite: Current Florida Teaching Certificate.

**EDF 5943 Practicum III in Urban Education (5).** Demonstration of competencies needed by teachers in urban schools. Prerequisite: Current Florida Teaching Certificate.

**EDF 5955 Field Study Abroad (3-6).** Development of international and cross-cultural understandings of educational philosophies and systems through planned travel and study abroad.

**EDG 3321 General Teaching Laboratory I: Basic Teaching Skills (3).** Practice in generic teaching skills, techniques and strategies basic to all age levels and subject matter areas. Lecture, seminar, and laboratory.

**EDG 3321L General Teaching Laboratory I: Laboratory (2).** General teaching skills laboratory to develop and refine basic teaching skills in the areas of instruction, classroom management, and evaluation. Corequisite: EDG 3321.

**EDG 3322 General Teaching Laboratory II: Human Relations Skills (3).** Designed to enable student to work effectively in multi-cultural and multi-ethnic communities through the examination of self, the development of human relations and communication skills, and the examination of today's complex urban society.

**EDG 4702 Educational Psychology of Multicultural Students (3).** Introduction to principles and procedures utilized in teaching students from multicultural communities. Prerequisite: Associate degree equivalent and Educational Psychology. Corequisite: EDG 4703.

**EDG 4703 Educational Psychology Supervised Field Experience with Multicultural Students (3).** Demonstration of competencies learned throughout study program in educational psychology of multicultural students. Prerequisite: Associate degree of equivalent.

**EDG 5325 Analysis of Teaching (3).** Examination of the research on instruction in teaching, and the development of skills in the observation and analysis of teacher behavior.

**EDG 5414C Instructional Strategies for the Classroom Teacher (4).** This course is specifically designed for the Modified Master's Program in Education. Focus is on generic teaching strategies suitable for teaching in South Florida. Special Emphasis will be placed on the development of competance and knowledge supportive of a reflective practitioner. Prerequisite: Permission of Instructor.

**EDG 5707 Cultural and Cross-Cultural Studies (3).** Overview of immigration patterns in U.S., discussions of theories of ethnicity, acculturation, intercultural communication. Development of teaching strategies for multicultural classrooms. Multicultural issues in elementary, secondary, adult, vocational, and special education will also be addressed.

**EDG 5757 Curriculum Development for Bilingual Programs (3).** Presents

curriculum designs and plans for bilingual schooling. Examines materials available for bilingual classes, with emphasis on adaptations and original creations to meet local needs. Issues in elementary, secondary, adult, vocational, and special education will also be addressed.

**EDP 3004 Introductory Educational Psychology (3).** An introduction to the ways in which the principles of psychology apply to educational practices, considering aspects of basic processes such as development, learning, individual differences, and adjustment, with special reference to the problems of teacher effectiveness and teacher-student interaction.

**EEC 4005 Early Childhood Education Programs (3).** Philosophy and theories of early childhood education; physical, emotional, social, and mental development. Observation and participation are required. Senior class status required. Prerequisites: EDG 3321, EDG 3321L. For Elementary Education majors only. Corequisite: EEC 4940, EEC 4941, or EEC 4942.

**EEC 4204 Curriculum and Instruction in Early Childhood Education (3).** Practical considerations of basic principles, experiments, research, and trends related to early childhood education. Examination of materials and techniques of teaching and working with parents. Prerequisites: EDG 3321, EDG 3321L. For Elementary Education majors only. Corequisite: EEC 4940, EEC 4941, or EEC 4942.

**EEC 4266 Curriculum Programs - Infancy (3).** Provides comprehensive coverage of curricula and educational programs for infants and toddlers.

**EEC 4267 Curriculum Programs - Preschooler (3).** The study and development of the curriculum for young children.

**EEC 4301 Trends in Early Childhood Education (3).** Understanding and dealing with critical issues; assessing the progress of contemporary programs locally and nationally; applying child development principles to the study of young children. Prerequisites: EDG 3321, EDG 3321L. For Elementary Education majors only. Corequisite: EEC 4940, EEC 4941, or EEC 4942.

**EEC 4524 Development and Administration of Early Childhood Programs (3).** Preparation for the administration of programs for young children. Prerequisite: Background in Early Childhood Education.

**EEC 4704 The Education and Development of Young Children (3).** Infant, toddlers and young children's physical, motor, intellectual, social and emotional development and educational enhancement.

**EEC 4940 Field Experience: Early Childhood (1).** Fall experience in observing and performing tasks in a public school early childhood classroom. For Education Majors only. Corequisite: EEC 4005, EEC 4204 or EEC 4301.

**EEC 4941 Field Experience: Early Childhood (1).** Spring experience in observing and performing tasks in a public school early childhood classroom. For Education majors only. Corequisite: EEC 4005, EEC 4204 or EEC 4301.

**EEC 4942 Field Experience: Early Childhood (1).** Summer experience in observing and performing tasks in an early childhood classroom For Education majors only. Corequisite: EEC 4005, EEC 4204, or EEC 4301.

**EEC 5906 Individual Study in Early Childhood Education (1-3).** Individual investigation in the area of preschool and early childhood education. Permission of instructor required.

**EEC 5926 Workshop in Early Childhood Education (3).** An opportunity for teachers to continue to develop competency in a specified area under the guidance of a specialist in selected fields in preschool and early childhood education. Prerequisite: Permission of instructor required.

**EED 4227 Educational Planning for Emotional Handicaps (3).** Concepts and skills with various models of curriculum, instruction, and classroom design for individuals with social and emotional adjustment problems. Laboratory experiences required. Prerequisites: EEX 4241, EEX 4601. Corequisite: EEX 4242.

**EEX 3010C Introduction to Exceptional Children and Youth (3).** Significant concepts in relation to the learning and adjustment problems of exceptional children and youth. Field experiences required.

**EEX 3202 Foundations of Exceptionality (3).** Basic concepts in relation to the biological, genetic, psychological, and social foundations of handicapping conditions, as they apply to classroom behavior.

**EEX 3221 Assessment of Exceptional Children and Youth (3).** Competencies in assessment of the basic modalities of learning (visual, auditory, haptic, and perceptual motor processes), and the language areas of reading, writing, spelling, and arithmetic.

**EEX 4070 Exceptional Children in the Mainstream of Education (3).** Characteristics of mildly handicapped children and techniques of identifying, assessing, managing and instructing them in the regular classroom.

**EEX 4241 Academic Skills for Exceptional Children (3).** Competencies in the selection, adaptation, and preparation of appropriate instructional materials in arithmetic, art, music, science, and social studies, including skill with audio-visual equipment and other multimedia approaches. Prerequisites: EEX 3010C, SPA 3000, EEX 3221, RED 4310.

**EEX 4242C Academic Skills for Exceptional Children (3).** A field-based course where competencies are demonstrated in the areas of assessment, prescriptive teaching, IEP development, lesson planning, and curriculum scope and sequence. Prerequisite EEX 4241.

**EEX 4601 Behavioral Approaches to Classroom Learning I (3).** Concepts and skills for building and modifying social and academic behaviors. Skills in precision teaching, behavior modification, and the functional analysis of behavior. Prerequisites: EEX 3010, 3202, SPA 3000, EEX 3221.

**EEX 4611 Behavioral Approaches to Classroom Learning II (3).** Concepts and skills necessary for the management and maintenance of classroom behavior, including token economies, current development planning, and parent/teacher consultation. Field experience required. Prerequisite: EEX 4601.

**EEX 4861 Student Teaching (12).** A field experience in a program for exceptional children, demonstrating competencies learned throughout the program.

**EEX 4905 Individual Study in Special Education (1-6).** Concepts or competencies contracted for between an undergraduate student and an instructor in accordance with the student's individual needs.

**EEX 5250 Reading for Exceptional Students (3).** Instructional and curricular adaptations and modifications of developmental reading programs for students for varying exceptionalities. Prerequisite: RED 4150 or equivalent.

**EEX 5771/HME 5255 Independent Living for the Handicapped (3).** Explores the special home and personal living skills required in order for persons with

mental and physical limitations to achieve their maximum independence. Suitable for students in psychoeducational services, health, physical education and recreation, social work, home economics, or anyone planning to work with the elderly or handicapped. Approved for certification for teachers of the mentally retarded.

**EGC 5305 Educational-Vocational Counseling (3).** Concepts and skills pertaining to vocational development, information systems, career education programs, educational-vocational counseling, and socio-psychological influences on career development

**EGC 5405 Introduction to Counseling (3).** Major theoretical concepts in counseling, competencies in relationship-building, interviewing, role-playing, simulation, and micro-counseling .

**EGC 5425 Crisis Counseling and Intervention (3).** Prevention and intervention strategies in crisis situations including child abuse and neglect, suicide, substance abuse, AIDS, and personal loss.

**EGI 5051 Nature and Needs of the Gifted (3).** Identification and placement procedures, history of the field, and psychological factors affecting development of the gifted-talented.

**EGI 5232 Educational Procedures and Curriculum for Gifted (3).** Basic curriculum models in education of the gifted. Relation of models to planning, implementation in traditional classrooms, resource rooms, and special classes.

**EIA 4042 The Role of Technology Education in the Schools (3).** Competency: Knowledge of the basic philosophy, goals, programs, principles, practices and learning environments in technology education and the relationship of technology education to other school disciplines.

**EIA 4360 Instruction in Technology Education (3).** Competency: Application of education principles, practices, and techniques to the teaching of technology education. Prerequisite: EDG 3321.

**EIA 4941C Student Teaching: Technology Education (9).** Competency: The utilization of instructional knowledge, attitudes, and skills in education instructional situations. Prerequisites: EIA 4360, EVT 3165.

**EIA 5811 Equipment and Facilities Planning (3).** Competency: Utilization of research, design, and engineering knowledge and skills to plan laboratory facilities and equipment.

**EIA 5905 Individual Study (1-3).** Competency: The ability to identify, research, and report on an industrial arts problem of interest to the student. Subject to approval of program advisor.

**EIA 5925L Workshop in Technology Education (3).** Competency: Selected competencies related to instructional and technical areas.

**ELD 4240 Educational Planning for Specific Learning Disabilities (3).** Concepts and skills with various models of curriculum, instruction, and classroom designs for individuals with specific learning disabilities. Laboratory experiences required. Prerequisites: EEX 4241, EEX 4601.

**EME 3402 Computers for Teachers (3).** An introductory course focusing on instructional uses of computers in pre-college education. Designed to provide skills in using computers as a classroom tool.

**EME 4103 Production and Use of Audio/Visual Media (3).** Knowledge and skill in selecting and producing audio-visual media. Emphasis is placed on student production of audio and visual materials and equipment use.

**EME 5315 Instructional Media (3).** Development of competencies for effective selection and utilization of instructional media. Consideration of sources, selection, evaluation, and methods of implementing media.

**EME 5403 Introduction to Instructional Delivery Systems (3).** A study of the rapidly expanding electronic media technology and its impact on instructional delivery. Prerequisite: EME 3402 or EME 6405.

**EME 5945 Workshop Computer Education (1-3).** Offers an opportunity for teachers and trainers to participate in activities using specific computer applications.

**EMR 4251 Educational Planning for the Mentally Retarded (3).** Concepts and skills used in planning educational, pre-vocational and vocational programs for the mentally retarded. Laboratory experiences required. Prerequisites: EEX 4241, EEX 4601.

**EVT 3065 Foundations of Vocational Education (3).** Competency: A knowledge of the history of vocational education on the national, state, and local levels.

**EVT 3161 Instructional Materials in Vocational Industrial Education (3).** Competency: Technical knowledge and skill required to locate and evaluate existing instructional material and to plan, develop, and validate existing instructional materials.

**EVT 3165 Course Planning (3).** Competency: Basic knowledge and skill in analyzing, planning, and organizing bodies of knowledge for instructional purposes.

**EVT 3367 Testing and Measurements in Vocational Education Subjects (3).** Competency: Technical knowledge and skill in planning for and using tests and measurements as an integral part of the vocational-technical laboratory/shop teaching-learning process. Prerequisite: EVT 3165.

**EVT 3815 Vocational Education Laboratory Management and Safety (3).** Competency: Knowledge and skill in analyzing, planning, organizing, and controlling laboratory environments and student's safe learning activities.

**EVT 4164 Technical Applications in the Content Area (3).** Competency: The ability to incorporate changing technical knowledge and skills of an occupational area into existing vocational education courses of study. Prerequisite: EVT 4946

**EVT 4280 Occupational Safety and Health (OSHA) (3).** Competency: Knowledge of the history, implications, and applications of the Occupational Safety and Health Act of 1970. For vocational and technical teachers, industrial employees, and management personnel.

**EVT 4310 Planning and Operating HOE Programs (3).** Competency: Identifying, designing, implementing, and evaluating Health Occupations Education Programs.

**EVT 4311 Special Teaching Lab in HOE Programs (3).** Competency: Knowledge of institutional structure, organization, policies, and roles of school personnel with actual teaching experience in area of specialization.

**EVT 4312 Instructional Strategies and Evaluation in HOE Programs (3).** Competency: Knowledge and skill in analyzing, planning, developing, executing, and evaluating classroom and laboratory teaching and learning activities in Health Occupations Education.

**EVT 4351 Teaching Limited-English-Proficient Students in Vocational Education (3).** Competency: Knowledge of the history, principles, and practices, as

well as skill in analyzing, planning, developing, executing, and evaluating classroom and laboratory teaching and learning activities for limited English Proficient students.

**EVT 4365 Instructional Strategies and Evaluation in Vocational and Technical Education (3).** Competency: Knowledge and skill in analyzing, planning, developing, executing, and evaluating classroom and laboratory teaching and learning activities.

**EVT 4502 Introduction to Vocational Special Needs Education (3).** Competency: Knowledge of historical developments, legislation, instructional strategies, and program alternatives required to instruct special needs students in vocationally related environments.

**EVT 4668 Emerging Emphasis in Career Education (3).** Competency: A knowledge of current trends and issues in reference to developing and integrating career education into current elementary and secondary educational programs.

**EVT 4905 Individual Study (1-3).** Competency: The ability to identify, research, and report on a special problem of interest to the student. Subject to approval of program advisor.

**EVT 4920 Group Training and Development (3).** Competency: Demonstrates the knowledge and skills necessary to design, prepare, conduct, and evaluate group training and development programs. Prerequisite: Permission of instructor.

**EVT 4931L Special Topics (1-3).** Competency: Analyzes and utilizes recent developments related to problems, practices, programs, and methodologies in organizational settings. Prerequisite: Permission of instructor.

**EVT 4940 Special Teaching Laboratory: Vocational Industrial Education and Technical Education (3).** Competency: Knowledge of institutional structure, organization, policies, and roles of school personnel, with actual teaching experience in areas of specialization. Prerequisites: EDG 3321, EDG 3322.

**EVT 4941 Student Teaching: Vocational Industrial Education and Technical Education (9).** Competency: Utilization of instructional knowledge, attitudes, and skills in a variety of instructional situations in the vocational educational setting. Prerequisites: EVT 4940, EVT 4311 for Health Education Majors.

**EVT 4942C Internship: Training and Development (3).** Competency: Application and refinement of competencies in training and development in non-public school settings. Prerequisites: Admission to Organizational Training Certificate Program and permission of instructor.

**EVT 4946 Field Experience: Technical Updating (3).** Competency: The identification and acquisition of current technical knowledge and skills in an occupational area. Prerequisite: Vocational certification.

**EVT 4949 Supervised Occupational Experiences (3-9).** Competency: Occupational skill developed via field based work-experience in industry, business, or a government agency in the occupation in which the student is preparing to teach.

**EVT 4990C Credit by Examination (3-9).** Competency: Technical knowledge and skills in an occupational area such as trade, industry, health and technology, as certified by recognized professional examinations such as the National Occupational Competency Test. Credits cannot be used in lieu of upper division professional program courses.

**EVT 5078 Technical Education in American Society (3).** Competency: Knowledge of the basic role and current status of technical education in an industrial democracy.

**EVT 5156 Teaching Career Related Activities (3).** Competency: Integration and articulation of career concepts and activities with regular curriculum.

**EVT 5168 Curriculum Development in Vocational Education (3).** Competency: Basic knowledge and skill in analyzing, planning, organizing, and developing curriculum in an area of specialization.

**EVT 5255 Cooperative Vocational Education Programs (3).** Competency: Knowledge and skill in the basic philosophy, principles, processes, and procedures of the cooperative method in vocational and technical education.

**EVT 5265 Supervision and Coordination of Vocational Education Programs (3).** Competency: Knowledge and skill in the supervision of personnel and the coordination of work to achieve institutional goals.

**EVT 5315 Improvement of Teaching Strategies in Health Occupations and Nursing Education (3).** Competency: Knowledge and skills in methods of teaching and clinical performance evaluation appropriate to the health field and development of teaching. Prerequisite: Permission of instructor.

**EVT 5317 Occupational Analyses in Health Occupations and Nursing Education (3).** Competency: Analysis of current trends in area of health specialty and their application to teaching learning situations in health occupations education. Prerequisites: Currently teaching, permission of instructor and professional liability insurance.

**EVT 5369 Vocational Educational Media (3).** Competency: Knowledge and skill in selecting, developing, and utilizing vocational instructional media forms to communicate or demonstrate concepts.

**EVT 5505 Vocational Laboratory Activities for Teachers of the Handicapped (3).** Competency: The use of projects, tools, materials and equipment to facilitate training the occupationally handicapped, physically handicapped, and mentally retarded. Approved for certification for teachers of the mentally retarded.

**EVT 5650 Trends and Issues in Vocational Education (3).** Competency: A knowledge of the basic philosophical and curricular trends and issues in vocational-technical education at the international, national, state, and local levels.

**EVT 5664 Community Relations and Resources for Vocational Education (3).** Competency: Knowledge and skill in developing and utilizing community resources and establishing public relations procedures and practices to implement vocational education programs.

**EVT 5695 International Comparative Vocational Education (3).** Competency: Skill and knowledge in comparison of vocational education in the United States in terms of purposes, systems, and problems with those of selected foreign countries.

**EVT 5769 Evaluation in Vocational and Technical Education (3).** Competency: Knowledge and skills in the use of tests and measurements, to evaluate teaching and learning effectiveness and the validity of objectives.

**EVT 5905 Individual Study (1-3).** Competency: The ability to identify, research, and report on a special problem of interest to the student. Subject to approval of program advisor.

**EVT 5925 Workshop in Vocational Education (1-6).** Competency: Selected

competencies related to instructional and technical areas.

**EVT 5927 Workshop in Health Occupations Education (1-3).** Competency: Selected competencies related to Health Occupations Education.

**FAD 2230 Family Life Cycle (3).** Study of the characteristics, problems, potentials, and adjustments unique to the various stages of the family life cycle, including ethnic and cultural influences on family life patterns. Includes field component with community agencies serving families.

**FAD 3253 Parenting (3).** Overview of changing concepts of parenthood and childhood. Explores contemporary issues concerning parenting with emphasis on maximizing human potential of parents and children. Open to non-majors . Recommended prerequisite: DEP 3001.

**FAD 4340/5341 Family Development: Adulthood and Aging (3).** Extension of the study of developmental patterns with emphasis on physical, intellectual, social, and emotional influences with particular emphasis on the family and/or family substitute. Graduate students will have additional requirements.

**FAD 4940 Human Development Practicum (2-3).** Experience in observing and working with individuals in one or more phases of the human life cycle. Students may select a day care center, public school, nursing home, hospital, or other community service agency. Prerequisites: CHD 3220, 4210, FAD 2230, or equivalent.

**FAD 5260 Family Development (3).** Dynamics of family interaction and structure, including analysis of socioeconomic and cultural influences, crisis-producing situations, and current issues and trends affecting the family unit.

**FAD 5450 Human Sexuality (3).** Provides a cognitive overview of human sexuality. Main emphasis is on the affective dimension - an exploration of attitudes and values related to sexuality.

**FLE 5895 Bilingual Education Teaching Methodologies (3).** Examination of various approaches to bilingual education, including specific school and classroom organizations. Development of specific instructional strategies for bilingual students. Issues in elementary, secondary, adult, vocational, and special education will also be addressed.

**FLE 5908 Individual Study (1-3)(ARR).** The student plans and carries out an independent study project under direction. Prerequisite: Consent of instructor.

**FLE 5945 Practicum: Modern Languages (6).** Supervised teaching in a junior or senior high school. Prerequisites: Admission to the Alternate Track Master's Program and completion of prerequisite coursework in education and subject matter area.

**FLE 4151 Bilingual School Curriculum and Organization (3).** Development of a theoretical understanding of the nature of a bilingualism, a rationale for bilingual education, and a set of principles and skills for organizing, bilingual-bicultural curriculum experiences in the elementary school. Prerequisites: EDF 3723, EDH 3321, EDG 3322.

**FLE 4314 Methods of Teaching Foreign Languages in the Elementary School (3).** Development of instructional skills, techniques and strategies for teaching modern languages in the elementary school.

**FLE 4375 Special Teaching Laboratory: Modern Languages (3).** Development of instructional skills, techniques, and strategies for teaching modern languages in the junior and senior high school. Prerequisites: EDF 3723, EDG 3321, and EDG 3322. Field experience required. Minimum prerequisite or corequisite of 14 hours in subject matter specialization.

**FLE 4870 Teaching Spanish as a Second Language (3).** Development of instructional skills, techniques, and strategies for teaching Spanish to nonnative speakers of Spanish in the elementary school. Prerequisites: EDF 3723, EDG 3321, EDG 3322, and Spanish proficiency.

**FLE 4871 Teaching Spanish to Speakers of Spanish (3).** Development of understandings and teaching skills needed in presenting integrated non-official language arts programs which would consider factors of languages and cultures in contrast. Prerequisites: EDF 3723, EDG 3321, EDG 3322, and Spanish proficiency.

**FLE 4942 Student Teaching (9).** Supervised teaching in a junior or senior high school. Prerequisites: EDF 3723, EDG 3321, EDG 3322, RED 4325, appropriate Special Teaching Laboratory, and appropriate number of hours in subject matter specialization.

**HEE 3302 Home Economics Educational Planning (3).** Competency: Development and adaptation of curriculum and strategies for the presentation of vocational home economics content in a variety of educational settings. Subject to approval of instructor.

**HEE 4104 Instruction in Vocational Home Economics (3).** Competency: Ability to apply educational principles, practices, and techniques to teaching home economics in varied educational environments. Prerequisite: EDG 3321. Subject to approval of instructor.

**HEE 4941 Student Teaching in Home Economics Education (9).** Competency: The utilization of instructional knowledge, attitudes, and skills in vocational home economics education instructional situations. Prerequisites: HEE 3302, HEE 4104, HEE 4944.

**HEE 4944 Special Teaching Laboratory Home Economics (3).** Competency: Knowledge of the educational institution, and utilization of teaching skills, via mini-teaching experiences within areas of home economics in selected institutions. Prerequisites: EDG 3321, EDG 3322.

**HEE 5335 Trends in Vocational Home Economics Education (3).** Competency: Knowledge of current social, economic, and educational issues affecting the field of vocational home economics.

**HEE 5360 Teaching Child Development (3).** Course is designed to upgrade competency in planning, researching, and evaluating experiences that are current in content and educational strategies.

**HEE 5361 Teaching Consumer Education and Family Economics (3).** Course is designed to upgrade competency in planning, researching, and evaluating experiences that are current in content and educational strategies.

**HEE 5362 Teaching Clothing and Textiles (3).** Course is designed to upgrade competency in planning, researching, and evaluating experiences that are current in content and educational strategies.

**HEE 5363 Teaching Family Life Education (3).** Course is designed to upgrade competency in planning, researching, and evaluating experiences that are current in content and educational strategies.

**HEE 5364 Teaching Housing and Home Furnishings (3).** Course is designed to upgrade competency in planning, researching, and evaluating experiences that are current in content and educational strategies.

**HEE 5365 Teaching Food and Nutrition (3).** Course is designed to upgrade competency in planning, researching,

and evaluating experiences that are current in content and educational strategies.

**HEE 5905 Individual Study (1-3).** Competency: The ability to identify, research, and report on a special problem in vocational home economics. Subject to approval of program advisor.

**HEE 5927 Special Workshop Home Economics Education (1-3).** Competency: Skill in developing, organizing, teaching, evaluating, and administering programs related to specified aspects of home economics education.

**HHD 3151 Housing: Shelter and Consumer (3).** Shelter alternatives and their effect on family and community. Analysis of types of housing and financing plans currently available to consumers.

**HHD 4420 Home Furnishings and Equipment (4).** Principles involved in the construction, selection, operation, and care of furnishings and equipment and their relationship to their environmental use.

**HLP 3013 Teaching Elementary Health and Education (3).** Designed to provide competencies necessary for the development and implementation of programs concerning use of leisure time and maintenance of personal health and family life. Prerequisites: For Education majors only with completed core.

**HME 4230 Management of Personal and Family Resources (3).** Application of management principles to personal and family decisions including human and non-human resources. Opportunity for community observation of management decisions made by persons of various ethnic groups and/or life styles and an analysis of the effect of these decisions on family relationships and personal success.

**HME 5225 Problems of Home Management in Contemporary Society (3).** Influence of diversified cultural impact on management life styles, with emphasis on problems of management resources. Discussion of problems related to single-parent homes, retirement, poverty, death, working parents, migrant families, and other human situations. Prerequisites: COA 2410, HME 4230, or permission of instructor.

**HME 5255/EEX 5771 Independent Living for the Handicapped (3).** Explores the special home and personal living skills required in order for persons with mental and physical limitations to achieve their maximum independence. Suitable for students in psychoeducational services, health, physical education and recreation, social work, home economics, or anyone planning to work with the elderly or handicapped. Approved for certification for teachers of the mentally retarded.

**HSC 5455 Basic Driver Education (3).** Content includes knowledge of the highway transportation system, rules and regulations. For Driver Education Certification endorsement.

**HSC 5456 Advanced Driver Education (3).** Content includes advanced skills for the teaching of driver's education. Prerequisite: HSC 5455.

**HSC 5465 Administration and Supervision of Driver Safety Education (3).** Content includes competencies for teacher preparation and improvement in driver and traffic safety education. Prerequisites: HSC 5455 and HSC 5456.

**HOE 4940 Career Traineeship in Home Economics (3-6).** Community based, supervised practical experience in a home economics-related career, to provide opportunity for career exploration in a chosen field, and application of knowledge to practical situations. Prerequisite: Permission of instructor.

**LAE 4314 Teaching Elementary Language Arts (3).** Designed to develop and refine those teaching competencies which allow the student to perform effectively as a teacher of children, using language arts activities to enhance communications skills. For Education majors only. Prerequisites: EDG 3321, EDG 3321L. Corequisite: EDE 4940, EDE 4941 or EDE 4942.

**LAE 4335 Special Teaching Laboratory English (3).** Development of instructional skills, techniques, and strategies for teaching English in the junior and senior high school. Prerequisites: EDF 3723, EDG 3321, and EDG 3322. Field experience required. Prerequisite of 21 hours required in English courses beyond lower division English prerequisites for this program. Requires 2-4 hours/week field work.

**LAE 4464 Experiencing Adolescent Literature in the Junior-Senior High School (3).** An examination of the most familiar types of literature found in the secondary school English curriculum today; and the development of strategies for organizing and providing a variety of literary experiences of students who differ in intellectual abilities and literary tastes.

**LAE 4851 Teaching English as a Second Language (3).** Development of instructional skills, techniques, and strategies for teaching English as a second language in the elementary school. Prerequisites: EDF 3723, EDG 3321, EDG 3322, and English proficiency.

**LAE 4942 Student Teaching (9).** Supervised teaching in a junior or senior high school. Prerequisites: EDF 3723, EDG 3321, EDG 3322, RED 4325, appropriate Special Teaching Laboratory, and appropriate number of hours in subject matter specialization.

**LAE 5415 Children's Literature (3).** Designed to develop a critical analysis of the purposes, strategies for teaching, and evaluation of literature for children. Prerequisites: RED 4150 and LAE 4314, or their equivalent.

**LAE 5908 Individual Study (1-3) (ARR).** The student plans and carries out an independent study project under direction. Prerequisite: Consent of instructor.

**LAE 5927 Workshop in Elementary Language Arts (1-3).** Offers opportunities for elementary school teachers to increase their understanding of reading language arts instruction, K-6. Emphasis on integrating language arts into reading. Prerequisite: Permission of instructor required.

**LAE 5945 Practicum: English Education (6).** Supervised teaching in a junior or senior high school. Prerequisites: Admission to the Alternate Track Master's Program and completion of prerequisite coursework in education and subject matter area.

**LEI 3000 Leisure and Recreation in America (3).** An introduction to the fundamental concepts of leisure and recreation and their roles in American culture. The class will be structured around a lecture-discussion format.

**LEI 3437 Program Development in Parks and Recreation Management (3).** Students will attain competencies in developing objectives, planning a program, and implementing and administering the program.

**LEI 3501 Liability and Law in Leisure, Recreation and Sports (3).** Legal issues related to leisure service management including legal foundations, legal liability, land use policy, employment regulations, handicapped services, and current issues.

**LEI 3524 Personnel Management in Parks and Recreation (3).** After a study of human interaction in a management setting, students will demonstrate competencies necessary for hiring staff, conducting group dynamics and communicating to the public.

**LEI 3542 Principles of Park and Recreation Management (3).** An exploration of the field of recreation and parks, including career areas. Students will be expected to demonstrate an understanding of management responsibilities and supervisory level principles and theory.

**LEI 3624 Turf Grass Management (3).** A practical approach to the care and maintenance of special grasses such as those found on golf courses and other recreational facilities.

**LEI 3630 Care and Maintenance of Grounds (3).** A study of procedures for maintaining outdoor facilities. Students will be expected to display competence in proper maintenance of areas normally found in parks and recreation centers.

**LEI 3703 Principles and Practices of Therapeutic Recreation (3).** History, philosophy and current principles of Therapeutic Recreation processes and application. Emphasis will be given to role of Therapeutic Recreation services and the role of Special Recreation.

**LEI 4573 Leisure Services Marketing (3).** Application of service marketing principles and practices to both the public and private leisure service industry to improve both effectiveness and efficiency of operations.

**LEI 4590 Seminar in Parks and Recreation Management (3).** A discussion of current problems, issues and trends in parks and recreation management, which will help the student develop those competencies necessary to deal with everyday aspects of particular programs.

**LEI 4700 Programming for Therapeutic Recreation (3).** Principles and practices in planning and implementing programs in Therapeutic Recreation settings. Special emphasis will be placed on a systematic approach through problem-solving techniques.

**LEI 4711 Client Assessment, Evaluation and Documentation in Therapeutic Recreation (3).** This course presents an overview of the theory, concepts and techniques used in client assessment, evaluation and documentation for therapeutic recreation treatment.

**LEI 4720 Problems, Issues & Concepts in Therapeutic Recreation (3).** This course provides an examination of current issues, trends and professionalization concerns in therapeutic recreation.

**LEI 4722 Therapeutic Recreation and Disabling Conditions (3).** Therapeutic recreation intervention and treatment based on the etiology, symptomatology and characteristics of disabling conditions.

**LEI 4813 Leisure Education and Facilitation Techniques for Therapeutic Recreation (3).** A focused survey of leisure education and counseling as applied in therapeutic recreation delivery systems.

**LEI 4842 Private and Commercial Recreation Management (3).** Identification, development, operation and impact of profit-oriented recreation enterprises.

**LEI 4931 Special Topics: Leisure Service Management (1-3).** Analyzes and utilizes recent developments related to problems, practices, contemporary issues, practices and methodologies in Leisure Service Management. Permission of instructor.

**LEI 4940 Internship I (9).** An on-the-job training program designed to enable students to develop those competencies which can only be gained from practical experience.

**LEI 4941 Internship II (12).** Advanced undergraduate supervised internship in a parks and recreation organization. Prerequisites: LEI 4940 and permission of instructor.

**LEI 5440 Program Development in Parks and Recreation (3).** The development of specific programs in parks and recreation with emphasis on special programs for young children, retardates, handicapped persons, and the elderly.

**LEI 5510 Program Administration in Parks and Recreation (3).** A detailed analysis of administrative procedures and responsibilities in connection with parks and recreation facilities and personnel.

**LEI 5595 Seminar in Parks and Recreation Management (3).** A discussion of current problems, issues, and trends in administration of parks and recreation programs.

**LEI 5605 Physical and Social Bases of Parks and Recreation Planning (3).** Concentration on major phases of predesign, design, development, actualization of park and recreation facilities. Course will explore funding, budget, site selection, layout, and maintenance.

**LEI 5716 Program Planning in Therapeutic Recreation (3).** This course is designed to prepare the student for the development of systematically designed therapeutic recreation service delivery programs from the viewpoint of the T.R. specialist and the T.R. administrator.

**LEI 5719 Client Assessment, Evaluation and Documentation in T.T. (3).** The course adresses client assessment, documentation and evaluation from the direct service prespective, administrative requirements, and health care regulatory agency demands.

**LEI 5907 Individual Study in Parks and Recreation Management (3).** An opportunity for individuals interested in various aspects of park and recreation administration to work on their own under the close supervision of an advisor. Permission of the instructor and department chairperson is required.

**MAE 4312 Teaching Elementary Mathematics (3).** Designed to develop and refine those teaching competencies which allow the student to perform effectively as a teacher of children, using mathematics as a mode of inquiry. For Education majors only. Prerequisites: Two college algebra courses or higher level math courses, EDG 3321, EDG 3321L. Corequisites: EDE 4940, EDE 4941, or EDE 4942.

**MAE 4333C Special Teaching Laboratory: Mathematics (3).** Development of instructional skills, techniques, and strategies for teaching mathematics in the junior and senior high school. Prerequisites: EDF 3723, EDG 3321, and EDG 3322. Field experience required. Minimum prerequisite or corequisite of 24 hours in subject matter specialization, including MTG 3212, STA 3321, COP 3112, or approved electives; permission of instructor required.

**MAE 4942 Student Teaching (9).** Supervised teaching in a junior or senior high school. Prerequisites: EDF 3723, EDG 3321, EDG 3322, RED 4325, appropriate Special Teaching Laboratory, and appropriate number of hours in subject matter specialization

**MAE 5516 Diagnosis and Remediation in Mathematics (3).** Strategies for studying symptoms, causes, and consequences of difficulties experienced by children in elementary school mathematics. Includes supervised case study and theoretical models. Prerequisite: MAE 4312.

**MAE 5655 Computers in Mathematics Education (3).** Examines the use of computers (microcomputers) in secondary school mathematics. Designing, evaluating, and using varied types of programs in mathematics classes. Learning to use computers to design mathematics curriculum.

**MAE 5908 Individual Study (1-3).** The student plans and carries out an independent study project under direction. Prerequisite: Consent of instructor.

**MAE 5923 Workshop in Elementary Math Education (3).** Production and application of materials and strategies for teaching mathematics in elementary and middle schools.

**MAE 5945 Practicum: Mathematics Education (6).** Supervised teaching in a junior or senior high school. Prerequisites: Admission to the Alternate Track Master's Program and completion of prerequisite coursework in education and subject matter area.

**MUE 3210 Teaching Elementary Music (3).** Designed to provide the student with competencies necessary for the development and implementation of music experiences in the elementary curriculum. Approved music skills course or waiver. For Education majors only. Prerequisites: music skills, EDG 3321, EDG 3321L. Corequisite: EDE 4940, EDE 4941 or EDE 4942.

**MUE 3332 Special Teaching Laboratory I (3).** Development of instructional skills, techniques, and strategies for school music performance organizations through laboratory and field experiences. Prerequisites: EDF 3723, EDG 3321, EDG 3322.

**MUE 4341 Special Teaching Laboratory II (3).** Field-based methods, materials and instructional skills designed to prepare students for Student Teaching in Music Education. Prerequisites: EDP 3004, EDF 3521 or EDF 3542, EDG 3321 and EDG 3321L, EDF 3723, EDG 3322, RED 4325 (or equivalent), MUE 3332, fours semesters of Instrumental Techniques, four semesters of Music History, three semesters of upper division Music Theory, and satisfactory performance on an audition in conducting and in the applied area; and approval of instructor.

**MUE 4940 Student Teaching (9).** Supervised teaching in an elementary school (5 weeks) and a secondary school (5 weeks). Prerequisites: EDF 3723, EDG 3321, EDG 3322; MUE 3332, MUE 4341; RED 4325, and 20 semester hours of the coursework required in music.

**MUE 5907 Directed Study in Music Education (1-3).** Individual investigation in one or more areas of music education.

**MUE 5928 Workshop in Music (1-3).** Applications of materials and techniques in music in a laboratory or field setting.

**MUE 5945 Practicum: Music Education (6).** Supervised teaching. Prerequisites: Admission to the Alternate Track Master's Program and completion of prerequisite coursework in education and the subject matter area.

**PEM 1141 Aerobic Fitness (1).** This course is designed to provide students with the skills and knowledge necessary to achieve and maintain desirable state of aerobic fitness. This course will not count towards graduation except for Physical Education majors.

**PEM 2101 Foundations of Fitness (3).** Presents concepts related to the evaluation, development, and maintenance of fitness, including principles of training, weight control and stress reduction. Provides instruction in lifetime sports.

**PEM 2131 Nautilus Weight Training (1).** Exercise on Nautilus equipment to improve cardio-respiratory endurance, muscular strength, and flexibility. After being taught how to use this equipment and fitness goals are established, each student will be monitored, via time controlled workouts, to improve the level of physical wellness. This course will not count towards graduation except for Physical Education majors.

**PEO 4004 Coaching Sports (3).** Students will examine the philosophy, organization, and skills necessary for coaching interscholastic sports in an educational environment.

**PEO 4041 Games in the Elementary and Middle School (3).** The study of the scope, structure, and sequence of games in Grades K-8. Emphasis on educational games and skill progressions for selected sports.

**PEP 3205 Gymnastics in the Elementary and Middle School (3).** The study of the scope, structure, and sequence of the gymnastics program in grades K-8. Emphasis on educational gymnastics and simple formal gymnastics.

**PEP 4102 Methods and Curriculum for Fitness Development Classes (3).** Includes content and methods for teaching activity/theory classes in which the primary emphasis is the development of fitness. Prerequisites: PET 3351 and EDG 3321.

**PET 3310 Kinesiology (3).** Students study the anatomical and mechanical principles of movement and apply this knowledge in the analysis of physical education and athletic sport activities. (Includes laboratory class periods.) Prerequisite: Anatomy.

**PET 3351 Exercise Physiology (3).** The study of the immediate physiological responses to exercise and the long-term adaptations that occur as a result of training.

**PET 3640C Adapted Physical Education (3).** Students gain knowledge of scientific factors and develop and implement physical education programs for special populations. Laboratory and Field Experience required.

**PET 3730 Physical Education in the Middle School (3).** The study of the scope, structure, and sequence of the middle school physical education curriculum. Emphasis on philosophy, teaching strategies, and curriculum development.

**PET 4035 Motor Learning and Development (3).** Examination of the developmental aspects of movement and the factors influencing the acquisition and performance of motor skills.

**PET 4383 Evaluation in Exercise Physiology (3).** The course prepares students to utilize and select or construct appropriate instruments for the assessment of fitness. Prerequisite: PET 3351.

**PET 4401 Administration of Physical Education (3).** An analysis of the organizational and administrative aspects of physical education programs.

**PET 4442 Physical Education in the Secondary School (3).** Students will study methods, philosophy, and curriculum for physical education in the secondary school. Field experiences required in addition to class work. Prerequisites: PET 3724, EDG 3321, EDG 3321L.

**PET 4464 Special Teaching Lab: Physical Education for Grades K-8 (3).** Emphasis on development of comprehensive physical education programs for grades K-8. Includes development of curriculum materials, analysis of teacher behaviors, development of teaching skills, and evaluation techniques. Prerequisites: DAE 3371, PEP 3205, PEO 4041, EDG 3321, EDF 3827.

**PET 4510 Evaluation in Physical Education (3).** Students will demonstrate competencies in motor skill testing, grading, and analysis of written test scores necessary for successful teaching in physical education.

**PET 4622C Athletic Injuries (3).** Students will demonstrate knowledge of the proper care and prevention of athletic injuries through the application of acceptable training techniques.

**PET 4940 Internship in Exercise Physiology: Undergraduate (3).** Supervised clinical experience designed to offer the student experience in graded exercise testing and exercise leadership. Prerequisites: PET 3351, PET 5387, and PET 5115.

**PET 4944 Student Teaching: Grades K-8 (1-12).** Supervised teaching in an elementary or middle school.

**PET 4945L Student Teaching: Grades 6-12 (12)** Supervised teaching in a middle or secondary school.

**PET 4946 Sports Management Internship (6-9).** Students must complete a supervised sports management internship program in an approved business or recreation setting. Prerequisite: Completion of required program courses.

**PEP 5116 Exercise Specialists (3).** The course prepares the student for the American College of Sports Medicine's Exercise Specialists Certification Examination. Prerequisites: PET 3351 and PET 5387.

**PEP 5117 Fitness for Older Adults (3).** The course explores the value of physical activity for improving the physical and mental well being of older adults. Emphasis is placed on exercise prescription and supervision of programs for those working with older adults. Prerequisite: PET 3351.

**PET 5216 Sports Psychology (3).** Course will include an analysis of psychological variables which might influence physical performance. Topics to be discussed include personality development, motivation, anxiety, tension, stress, aggression, attribution theory, and social facilitation. The course is intended for prospective physical educators and others interested in motor performance.

**PET 5238C Perceptual Motor Learning (3).** Students will demonstrate knowledge and understanding of various approaches to, and theories of, perceptual motor learning, with special emphasis in physical education. Perceptual motor tasks will be performed as well as taught by the students.

**PET 5256C Sociology of Sport (3).** Students will demonstrate a thorough understanding of the sociological bases of sport and will actively engage in a field study involving a particular phase of sport and society.

**PET 5387 Exercise Test Technology (3).** The course prepares the student for the American College of Sports Medicine's Exercise Test Technology Certification examination. Prerequisite: PET 3351.

**PET 5436 Physical Education Curriculum in the Elementary School (3).** Examination of objectives, content, methods of teaching, and evaluative techniques in elementary school physical education. Emphasis on curriculum development and refinement of teaching skills.

**PET 5476 Sports Management and Administration (3).** Examination of skills and knowledge required in the management and administration of sports-related careers in athletics, recreation, or industry. Prerequisites: Basic management courses: MAN 3025, PAD 4432 or equivalent.

**PET 5625C Sports Medicine (3).** Advanced conditioning techniques, strength and cardio-vascular endurance training are presented. The prevention and treatment of overuse injuries are also emphasized. Prerequisite: PET 3351.

**PET 5906 Individual Study (1-3).** Students will work independently on a topic concerning some phase of physical education or sport under the guidance of a faculty member. Registration is by permission of advisor.

**PET 5925 Workshop in Physical Education (1-3).** Production and or application of materials and techniques for physical education in a classroom and or field setting.

**PET 5931 Special Topics in Exercise Physiology (1-3).** Designed to present contemporary issues and practices in exercise physiology. Prerequisite: PET 3360.

**PET 5936 Special Topics in Physical Education (1-3).** Designed to present contemporary issues and practices in physical education and sport.

**RED 4150 Teaching Primary Reading (3).** Designed to develop and refine those teaching competencies which allow the student to perform effectively as a teacher of reading. For Education majors only. Must have completed EDG 3321, EDG 3321L. Corequisite: EDE 4940, EDE 4941 or EDE 4942.

**RED 4311 Teaching Intermediate Reading (3).** Designed to provide participants with knowledge and skills necessary for teaching children to read materials used in the intermediate grades. Builds on competencies gained in RED 4150. For Education majors only. Prerequisite: RED 4150. Corequisite: EDE 4941 or EDE 4942.

**RED 4325 Special Teaching Laboratory: Reading (3).** Development of instructional skills, techniques, and strategies for teaching reading in the junior and senior high school. Attention to attaining competence in subject-matter related reading skills.

**RED 5447 Analysis and Production Reading Materials (3).** Exploration, creation, and evaluation of basic reading materials, commercial and non-commercial. Prerequisite: RED 4150 or equivalent.

**RED 5448 Teaching Reading by Computer (3).** Evaluation and creation of computer programs for teaching reading in grades 4-12. No prior computer experience is required.

**RED 5911 Individual Study in Reading (1-3).** Individual investigation in the area of instruction. Permission of instructor required.

**RED 5925 Workshop in Reading Education (3).** An opportunity for teachers to continue to develop competency in a specified area under the guidance of a specialist in selected fields in reading education. Permission of instructor required.

**SCE 4310 Teaching Elementary Science (3).** Designed to develop and refine those teaching competencies which allow the student to perform effectively as a teacher of children, using science as a mode of inquiry. For Education Majors only. Prerequisites: EDG 3321, EDG 3321L and must have successfully completed a biology and a physical science course. Corequisite: EDE 4940, EDE 4941 or EDE 4942.

**SCE 4330 Special Teaching Laboratory: Science (3).** Development of instructional skills, techniques and strategies for teaching biological and physical sciences in the junior and senior high schools. Prerequisites: EDF 3723, EDG 3321, and EDG 3322. Field experience required. Minimum prerequisite or corequisite of 16-20 hours in subject matter specialization.

**SCE 4944 Student Teaching (9).** Supervised teaching in a junior or senior high school. Prerequisites: EDF 3723, EDG 3321, EDG 3322, RED 4325, appropriate Special Teaching Laboratory, and appropriate number of hours in subject matter specialization.

**SCE 5435 Secondary Science Laboratories: Methods & Materials (3).** Increase the quantity and quality of laboratory experiences for secondary students by managing the laboratory

safely, selecting appropriate activities, and evaluating student performance.

**SCE 5905 Individual Study (1-3).** The student plans and carries out an independent study project under direction. Prerequisite: Consent of instructor.

**SCE 5930 Workshop in Elementary Science Education (3).** Focus on content methods, and materials needed for teaching science in the elementary school, K-6. Permission of instructor required.

**SCE 5945 Practicum: Science Education (6).** Supervised teaching in a junior or senior high school. Prerequisites: Admission to the Alternate Track Master's Program and completion of prerequisite coursework in education and subject matter area.

**SPA 3000 Introduction to Language Development and Communication Disorders (3).** Skills in assessing and classroom programming for language development and for various speech and language disorders of children.

**SSE 4312 Teaching Elementary Social Studies (3).** Designed to develop and refine those teaching competencies which allow the student to perform effectively as a teacher of children, using social studies as a mode of inquiry. For Education majors only. Prerequisite: EDG 3321, EDG 3321L. Corequisite: EDG 4940, EDE 4941 or EDE 4942.

**SSE 4380C Developing a Global Perspective (3).** Theory, content, and practice. Introduction and utilization of learning materials and teaching strategies in Global Education for K-12.

**SSE 4384C Special Teaching Laboratory: Social Studies (3).** Development of instructional skills, techniques, and strategies for teaching social studies in the junior and senior high school. Prerequisites: EDF 3723, EDG 3321, and EDG 3322. Field experience required.

**SCE 4942 Student Teaching (12).** Supervised teaching in a junior or senior high school. Prerequisites: EDF 3723, EDG 3321, EDG 3322, RED 4325, appropriate Special Teaching Laboratory, and appropriate number of hours in subject matter specialization.

**SSE 5908 Individual Study (1-3) (ARR).** The student plans and carries out an independent study project under direction. Prerequisite: Consent of instructor.

**SSE 5929 Workshop in Elementary Social Studies Education (3).** Focus on content, methods and materials needed for teaching social studies in the elementary school, K-6. Permission of instructor required.

**SSE 5945 Practicum: Social Studies Education (6).** Supervised teaching in a junior or senior high school. Prerequisites: Admission to the Alternate Track Master's Program and completion of prerequisite coursework in education and subject matter area.

**TSL 5142 Curriculum Development in English as a Second Language (3).** Description, analysis, planning, design, and evaluation of curriculum in English as a second language (K-adult). Prerequisite: TSL 6341.

**TSL 5371 Special Methods of TESOL (3).** Investigation of modern techniques for the teaching of oral and written communication in English to non-native speakers of English, including the evaluation and development of materials for English to speakers of other languages. Issues in elementary, secondary, adult, vocational, and special education will also be addressed. Prerequisite: LIN 3010.

## College of Education

*Dean* **I. Ira Goldenberg**
*Associate Dean for Academic Affairs* **Robert Vos**
*Associate Dean for Student and Community Services* **Toni Bilbao**
*Director of Budget and Finance* **Carmen Mendez**
*Assistant Dean for North Miami Campus/ Broward* **Janice R. Sandiford**

***Chairpersons:***

*Educational Leadership, and Policy Studies* **Stephen M. Fain**
*Educational Psychology and Special Education* **Stephen S. Strichart**
*Health Physical Education and Recreation* **Ida F. Chadwick**
*Middle, Secondary and Vocational Education* **Luis A. Martinez-Perez**
*Elementary Education* **Alicia Mendoza**
*Urban, Multicultural and Community Community* **Robert V. Farrell**

***Coordinators/Directors***

*Coordinator of Doctoral Programs* **Robert Vos**
*Director of Internship and Student Teaching* **TBA**
*Director of Student Services* **Susan H. Lynch**

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**Winter, Robert S., Ph.D.** *(University of Illinois), Associate Professor, International Development Education, Educational Technology, Educational Leadership and Policy Studies*

**Wolff, Robert M., Ph.D.** *(Ohio State University), Associate Professor, Parks and Recreation Management, Health, Physical Education and Recreation*

**Woods, Sandra L., Ed.D.** *(Rutgers University), Associate Professor, Elementary Education*

# College of Engineering and Design

**Gordon R. Hopkins,** *Dean*
**Gautam Ray,** *Associate Dean*
**Adele Smith,** *Associate Dean*
**Gustavo Roig,** *Acting Associate Dean*
**Neil Hout-Cooper,** *Director of Information Systems and External Programs*

The College of Engineering and Design is composed of two schools committed to the development of professionals who will serve the community in a wide variety of fields. In addition, there are two units in the College solely devoted to research and other creative activities.

Bachelor's Degree Programs are offered in the following fields of study:

Apparel Management
Architectural Technology
Civil Engineering
Computer Engineering
Construction Management
Electrical Engineering
Industrial Engineering
Interior Design
Mechanical Engineering

Undergraduate Professional Certificates are available in:

Advanced Apparel Design
Apparel Production
Retailing
Heating, Ventilation and Air Conditioning Design
Industrial Safety
Production and Manufacturing

The programs of the College are directed towards the practical use of scientific, engineering and technical principles to meet the objectives of industry, business, government and the public.

The College provides each student with the opportunity to develop marketable skills and to obtain an education which will prepare him or her for a rewarding career and personal growth.

Underlying the programs of the College is a recognition that the growing impact of technology upon the quality of life is growing and that the proper application of technology is critical to meeting current and emerging human needs.

The College is actively engaged in a number of special programs as a service to the community and the University. One of these activities is the International Association for Housing Science, an organization with membership from more than 20 nations, dedicated to improving housing technology and production, as well as studying the inter-disciplinary aspects of housing.

The College faculty is actively engaged with business, industry and government. Faculty members are participating in a variety of applied research projects in such areas as energy, transportation, solid waste disposal, biomedical devices and instrumentation, water resources, computer engineering, artificial intelligence, manufacturing, robotics, telecommunications, micro-electronics, structural systems biotechnology, etc.

# School of Engineering

**Gordon R. Hopkins,** *Dean*
**Gautam Ray,** *Associate Dean*
**Gustavo Roig,** *Acting Associate Dean*
**Neil Hout-Cooper,** *Director of Information Services and External Programs*

The School offers baccalaureate degree programs in Electrical Engineering, Computer Engineering, Civil Engineering, Industrial Engineering and Mechanical Engineering. The various curricula for the School are designed to give the student an education for entry into the profession of engineering.

## Accreditation

The Engineering Accreditation Commission of the Accreditation Board for Engineering and Technology (ABET) accredits college engineering programs on a nationwide basis. Accreditation is important in many areas of the engineering profession. Students wishing more information about accreditation should consult their departmental office or the Office of the Dean. The following engineering baccalaureate programs are ABET accredited: Civil, Electrical, Industrial, and Mechanical.

## Plan of Study

The subjects basic to all fields of engineering are generally studied while the student is in the first two years of undergraduate study in a pre-engineering curriculum. Specialized or departmental courses are taken in the third or fourth years with additional interspersed mathematics and humanistic-social studies. To earn a bachelor's degree in engineering, a student must complete the approved curriculum requirements, and must have a cumulative GPA of at least 2.0 on all engineering courses taken at the University.

The engineering programs include a strong engineering core foundation designed to prepare the prospective engineer not only with a broad base of fundamental courses in mathematics, sciences and technical knowledge, but also with a solid cultural background in humanities, social sciences and English. In addition to the core subjects, the student must complete an engineering discipline specialization under the direction of the respective administrative department.

## Admission Preparation

Prospective students who are considering engineering should follow an academic program to meet engineering prerequisites. The student planning to transfer to the engineering program as a junior should follow a pre-engineering program in the first two years of college work. Many courses required by the engineering curriculum are specialized in their content and students need to select lower division courses with care. The normal maximum number of credits transferred from a community college is 60 semester credits.

Freshman admission to the University is determined by the admission standards of the lower division. The admitted freshmen should discuss their future program intentions with their lower division academic advisor and plan their lower level course selections towards their engineering program goals. The freshman should have had high school preparatory work of high intellectual quality and of considerable breadth. Specifically, students admitted to the lower division with a degree in engineering as their goal should have the minimum preparatory studies in mathematics (algebra, geometry, trigonometry, analytical geometry, or pre-calculus) and chemistry. Physics and introduction to computers are recommended, but not required. Admitted freshmen students planning to major in an engineering program should contact an engineering advisor as early as possible, preferably before earning 30 semester credit hours.

## School of Engineering Admission Policy

The admission policy for freshmen and transfer students are different and the policies vary in each department. (Refer to the Admission Policy in the department of your choice.)

### FIU Freshmen

Any student seeking admission to an undergraduate degree program in the School will be admitted by the Admissions Office if the following criteria are met.

a. The University Admission requirements are met;

b. In order to enter a program in Industrial, Civil and Mechanical, a student must earn a grade of 'C' or higher in the following courses: Calculus I, Calculus II, Physics I with Calculus and Chemistry I.

c. In order to enter a program in Electrical or Computer Engineering, a student must earn a minimum grade of 'C' in all Calculus courses, Differential Equations, Physics I with Calculus, Physics II with Calculus and Chemistry I with an overall GPA of 2.5 in these courses.

d. The highest grade earned is to be counted for a repeated course, but only one repeat of a course will be considered.

e. Pass the CLAST exam.

To qualify for admission to the program, FIU undergraduates must have met all the lower division requirements including CLAST, completed 60 semester hours, and must be otherwise acceptable in the program.

Students must have met the prerequisites and corequisites to register for any course. Otherwise, the student will be dropped from the course before the end of the term, resulting in a grade of 'DR' or 'DF'. Students should refer to the Catalog or see an advisor to determine course prerequisites.

### Admission Policy for Transfer Students*

a. All transfer students must abide by the University's policies and conditions. Applicants who do not have an Associate in Arts degree must apply to the Office of Admissions and to the Department of their choice at least two months before the beginning of the term.

b. There is a two step process in the evaluation of transfer credits. The first step is carried out by the Office of Admissions, which informs the applicant about the courses that could count at the University.

The second step is done by the specific Engineering Department who has the last word on this matter. This has to be done so as to fulfill ABET requirements.

c. Pass the CLAST.

*FIU adheres to the Board of Regents Articulation Agreement between the Universities and Community Colleges of the State of Florida.

### Core Curriculum Courses for all Engineering Programs

| | | |
|---|---|---|
| MAC 3311 | Calculus I | 3 |
| CHM 1045 | General Chemistry I | 4 |
| CHM 1045L | General Chemistry I Lab | 1 |
| ENC 1101 | Freshman Composition | 3 |
| EGS 1110C | Engineering Drawing[1] | 3 |

[1]Engineering Drawing is required unless previously taken in high school.

| | | |
|---|---|---|
| MAC 3312 | Calculus II | 5 |
| ENC 1102 | Techniques of Interpretation | 3 |
| PHY 3048 | Physics with Calculus I | 5 |
| PHY 3048L | General Physics Lab I | 1 |

### Course repeats

This varies depending upon the particular program. For more information consult your advisor or Chairperson.

### Academic Advisors

A student who has been accepted to a degree program in the College must obtain and consult an advisor prior to the first class enrollment. An advisor may be obtained by contacting the Chairperson of the Department in which an academic major is desired. Continued contact (at least once per semester) with the advisor is urged to review progress and select courses for each succeeding semester. Such contact is required until an approved program of study is completed.

Courses taken without the required prerequisites and corequisites will be dropped automatically before the end of the term, resulting in a grade of 'DR' or 'DF'.

### Cooperative Education

A Cooperative Education (Co-Op) Program is conducted by the College in conjunction with the Department of Cooperative Education in the Division of Student Affairs. In this program, students spend alternate semesters in school full-time and fully employed in industry in a technical position directly related to their major. Students receive full pay for their work in industry.

Placement in co-op positions is arranged by the Co-Op Programs and includes both local and national industrial, business and governmental agencies. Co-Op students must agree to spend at least three work periods in industry and must be able to complete the upper division program within two calendar years.

Applicants for the program are evaluated by the College and should contact the Associate Dean. Because of the requirement for three work periods, students should enter the program during the first semester of the junior year. Inquiries from lower-division students, prior to transfer to the University, are encouraged since work may be arranged immediately upon enrollment. The Co-Op program also offers the Parallel Co-Op whereby a student might alternate work and study during the same semester by attending the University part-time and working part-time in industry.

### General Requirements for a Baccalaureate Degree

In order to obtain a Bachelor's degree from the College, each student must satisfy the following minimum requirements:

1. Obtain the minimum number of semester credits required by the specific program. Some majors require more than the minimum number of credits. Specific requirements beyond the minimum requirements are described in the sections devoted to the various departments in the College.

2. Complete at least 35 semester credits in the upper-division.

3. Attain a minimum grade-point average of 2.0 in all engineering courses taken at the University.

4. Satisfy the general education requirements of the State of Florida for the Bachelor's degree.

5. Satisfy the particular requirements for his or her own major and all University requirements for graduation.

### Academic Appeal Procedures

Academic Appeals not covered under the Academic Misconduct Policy shall be processed in the following manner:

Step 1. The student and faculty member will meet informally in an attempt to resolve the problem within 45 days of the alleged occurrence.

Step 2. If the informal meeting does not result in an acceptable remedy, the student can appeal in writing to the Department/Divisional Chairperson within *ten days* of the informal meeting. The written appeal should include the nature and conditions of the problem and a summary of the informal meeting with the faculty member involved.

Within ten days of the receipt of the written appeal, the Chairperson, student, and faculty member will meet in an attempt to resolve the problem.

Step 3. If the results from the meeting in Step 2 is not acceptable, the student can appeal in writing to the Dean of the College within ten days. The written appeal should include the nature and conditions of the problem and a summary of the meetings in Step 1 and 2.

Within ten days of the receipt of the written appeal, the Dean will meet with the Chairperson, the student, and the faculty member in an attempt to resolve the problem.

The Dean will provide a written decision within ten days of the meeting in Step 3.

The Dean's decision is final.

# Civil and Environmental Engineering

**Oktay Ural,** *Professor and Chairperson*
**Robert J. Fennema,** *Assistant Professor*
**Jeffrey H. Greenfield,** *Assistant Professor*
**Luis A. Prieto-Portar,** *Professor*
**L. David Shen,** *Associate Professor*
**Vasant H. Surti,** *Professor*
**Lambert Tall,** *Professor*
**Berrin Tansel,** *Visiting Assistant Professor*
**Leroy E. Thompson,** *Professor*
**Fernando Tinoco,** *Visiting Professor*
**Ton-Lo Wang,** *Associate Professor*

## Bachelor of Science in Civil Engineering

**Lambert Tall,** *Undergraduate Advisor*

The Civil Engineering curriculum provides a background of interrelated subdisciplines of Civil Engineering with the fundamental core subjects of the engineering program. The technical interdisciplinary courses are in the areas of construction, geotechnical, environmental, structures, surveying, transportation, urban planning and water resources. Civil engineers play an essential role in serving people and the environmental needs of society. These needs relate to shelter, mobility, water, air and development of land and physical facilities.

To qualify for admission to the program, FIU undergraduates must have met all the lower division requirements including CLAST, completed 60 semester hours and must be otherwise acceptable into the program. All other applicants must meet regular University transfer admission requirements.

The basic upper division requirements for the BSCE degree are as follows:

**Engineering Sciences** (24 )

| | | |
|---|---|---|
| CWR 3201 | Fluid Mechanics | |
| CWR 3201L | Fluid Mechanics Laboratory | |
| EEL 3003 | Electrical Engineering 1 | |
| EGM 3520 | Engineering Mechanics of Materials | |
| EGM 3520L | Materials Testing Laboratory | |
| EGN 3311 | Statics | |
| EGN 3321 | Dynamics | |
| EGN 3343 | Thermodynamics 1 | |
| EGS 1110C | Engineering Drawing | |
| ESI 3161 | Industrial Applications of Microprocessors | |

**Civil Engineering Curriculum** (48)

| | | |
|---|---|---|
| CEG 4011 | Geotechnical Engineering 1 | 3 |
| CEG 4011L | Soil Testing Laboratory | 1 |
| CES 3100 | Determinate Structural Analysis | 3 |
| CES 4101 | Indeterminate Structural Analysis | 3 |
| CES 4605 | Steel Design | 3 |
| CES 4702 | Reinforced Concrete Design | 3 |
| CGN 3501 | Civil Engineering Materials | 3 |
| CGN 4802 | Civil Engineering Senior Design Project | 3 |
| CWR 3103 | Water Resources Engineering | 3 |
| ENV 3001 | Introduction to Environmental Engineering | 3 |
| ENV 3001L | Environmental Laboratory | 1 |
| SUR 3101 | Surveying | 3 |
| TTE 4201 | Transportation and Traffic Engineering | 4 |

### Civil and Environmental Engineering Options

The Civil and Environmental Engineering Program offers the following options: Structures; Environmental; Transportation; Geotechnical; Construction Engineering Management and Water Resources. The student should select the appropriate electives from the catalog, with the guidance of the faculty advisor.

**First Semester:** (17)

| | | |
|---|---|---|
| MAC 3311 | Calculus I | 3 |
| CHM 1045 | General Chemistry I | 4 |
| CHM 1045L | General Chemistry I Lab | 1 |
| ENC 1101 | Freshman Composition | 3 |
| Engineering Drawing[1] | | 0 |
| Modern Language I | | 5 |
| Introduction to Engineering course | | 1 |

[1]Engineering Drawing is required unless previously taken.

**Second Semester:** (16)

| | | |
|---|---|---|
| MAC 3312 | Calculus II | 5 |
| PHY 3048 | Physics with Calculus | 5 |
| PHY 3048L | General Physics Lab I | 1 |
| Modern Language II | | 5 |

**Suggested Summer Term:** (13)

| | | |
|---|---|---|
| CHM 1046 | General Chemistry II | 3 |
| CHM 1046L | General Chemistry Lab II | 1 |
| | or | |
| GLY 1010 | Physical Geology | |
| GLY 1010L | Physical Geology Lab | |
| ENC 1102 | Techniques of Interpretation | 3 |
| Literature/Art/Drama/Music course | | 3 |
| Social Science I | | 3 |

**Third Semester:** (18)

| | | |
|---|---|---|
| MAP 3302 | Differential Equations | 3 |
| PHY 3049 | Physics with Calculus | 5 |
| PHY 3049L | General Physics Lab I | 1 |
| EGN 3311 | Statics | 3 |
| CGS 3420 | Programming for Engineers | 3 |
| Historical Analysis course | | 3 |

**Fourth Semester:** (15)

| | | |
|---|---|---|
| MAC 3313 | Multivariable Calculus | 3 |
| EGN 3321 | Dynamics | 3 |
| SUR 3101 | Surveying | 3 |
| Philosophical Analysis course I | | 3 |
| Social Science II course | | 3 |

**Fifth Semester:** (17)

| | | |
|---|---|---|
| STA 3033 | Introduction to Probability and Statistics for CS | 3 |
| EGM 3520 | Engineering Mechanics of Materials | 3 |
| EGM 3520L | Engineering Mechanics of Material Lab | 1 |
| CWR 3201 | Fluid Mechanics | 3 |
| CWR 3201L | Fluid Mechanics Lab | 1 |
| Civil Engineering Elective | | 3 |
| CWR 3103 | Water Resources | 3 |

**Sixth Semester:** (16)

| | | |
|---|---|---|
| EEL 3003 | Electrical Engineering I | 3 |
| CES 3100 | Determinate Structural Analysis | 3 |
| CGN 3501 | Civil Engineering Materials | 3 |
| ENV 3001 | Introduction to Environmental Engineering | 4 |
| EIN 3354 | Engineering Economy | 3 |

**Seventh Semester:** (16)

| | | |
|---|---|---|
| CES 4101 | Indeterminate Structural Analysis | 3 |
| CES 4605 | Steel Design | 3 |
| CEG 4011 | Geotechnical Engineering I | 3 |
| CEG 4011L | Soil Testing Laboratory | 1 |
| TTE N4201 | Transportation & Traffic | 3 |
| CE Elective | | 3 |

**Eighth Semester:** (18)

| | | |
|---|---|---|
| CES 4702 | Reinforced Concrete | 3 |
| CGN 4802 | Civil Engineering Senior Design Project | 3 |
| CE Elective | | 3 |
| EGN 2030 | Ethics & Legal Issues | 3 |
| Philosophical Analytica coursel | | 3 |
| ENC 3210 | Technical Writing and Communication | 3 |

## Course Descriptions

### Definition of Prefixes

CES-Civil Engineering Structures; ECI-Engineering, Civil; EGM-Engineering, Mechanics; EGN-Engineering, General;

EGS-Engineering, Science; ENV-Engineering, Environmental; SUR-Surveying and Related Areas; TTE-Transportation and Traffic Engineering

**CCE 4001 Heavy Construction (3).** Contractor's organization, contracts, services, safety, planning and scheduling. Equipment and their economics. Special project applications, cofferdams, dewatering, river diversions, tunnelling.

**CEG 4011 Geotechnical Engineering I (3).** Engineering geology, soil properties; stresses in soils and failures; consolidation and settlement; compaction, soil improvement and slope stabilization. Prerequisite: EGM 3520.

**CEG 4011L Soil Testing Laboratory (1).** Laboratory experiments to identify and test behavior of soils and rocks. Prerequisite: EGN 3520. Corequisite: CEG 4011.

**CEG 4012C Geotechnical Engineering II (4).** Principles of foundation analysis and design: site improvement for bearing and settlement, spread footings, mat foundations, retaining walls/earth, cofferdams, piles, shafts, caissons, tunnels, and vibration control. Computer applications. Prerequisite: CES 4702.

**CES 3100 Determinate Structural Analysis (3).** To introduce the student to the basic concepts and principles of structural theory relating to statically determinate beams, arches, trusses and rigid frames, including deflection techniques. Prerequisite: EGM 3520

**CES 4101 Indeterminate Structural Analysis (3).** To introduce the student to the basic concepts and principles of structural theory relating to statically indeterminate beams, trusses and rigid frames; including Slope Deflection, Moment Distribution, and Matrix Methods. Prerequisite: CES 3100.

**CES 4605 Steel Design (3).** The analysis and design of structural elements and connections for buildings, bridges, and specialized structures utilizing structural steel. Both elastic and plastic designs are considered. Prerequisite: CES 3100.

**CES 4702 Reinforced Concrete Design (3).** The analysis and design of reinforced concrete beams, columns, slabs, retaining walls and footings; with emphasis corresponding to present ACI Building Code. Introduction to prestressed concrete is given. Prerequisite or Corequisite: CES 4101.

**CGN 3501 Civil Engineering Materials (3).** A study of the principal materials used for engineering purposes with special attention to their mechanical properties, the importance of these properties, and the appropriate tests to assure the quality of these materials. Prerequisite: EGM 3520.

**CGN 3949 Co-Op Work Experience (1-3).** Supervised full-time work experience in engineering field. Limited to students admitted to the co-op program with consent of advisor. Evaluation and reports required.

**CGN 4802 Civil Engineering Senior Design Project (3).** Senior students to design a practical project by utilizing knowledge learned from previous courses for presenting a solution. Done under the supervision of a faculty member and professional engineer. Prerequisite: Civil Engineer senior standing.

**CGN 4930 Special Topics in Civil Engineering (1-4).** A course designed to give groups of students an opportunity to pursue special studies not otherwise offered.

**CGN 4949 Co-Op Work Experience (1-3).** Supervised full-time work experience in engineering field. Limited to students admitted to the co-op program with consent of advisor. Evaluation and report required. Prerequisite: CGN 3501. Corequisite: CES 4101.

**CWR 3103 Water Resources Engineering (3).** Hydrology, probability, ground and surface water studies. Closed conduit flow and hydraulic machinery. Prerequisites: CWR 3201 and STA 3033.

**CWR 3201 Fluid Mechanics (3).** A study of the properties of fluids and their behavior at rest and in motion. Continuity, momentum, and energy principles of fluid flow. Prerequisite: EGN 3321. Corequisite: CWR 3201L

**CWR 3201L Fluid Mechanics Laboratory (1).** Application of fluid mechanics principles in the laboratory. Experiments in surface water, groundwater and pipe flow. Prerequisite: CWR 3201.

**EGM 3520 Engineering Mechanics of Materials (3).** Analysis of axial, torsional, bending, combined stresses, and strains. Plotting of shear, moment and deflection diagram with calculus applications and interpretations. Prerequisites: MAC 3412 and EGN 3311.

**EGM 3520L Materials Testing Laboratory (1).** Introduction to measurements of basic mechanical properties of materials. Experiments include axial tension, compression, trosion, flexure, and the response of simple structural elements. Prerequisites: MAC 3412 and EGN 3311.

**EGN 2030 Ethics and Legal Aspects in Engineering (3).** Codes of ethics, professional responsibilities and rights, law and engineering, contracts, torts, evidence.

**EGN 3311 Statics (3).** Forces on particles, equilibrium of forces, moments, couples, centroids, section properties, and load analysis of structures. Prerequisites: PHY 3049 and MAC 3413.

**EGN 4116 Engineering Graphics II (3).** Computer graphical methods in engineering analysis and design. Problem solving via FORTRAN with emphasis on hands-on experience with inter-active computers (AutoCad and Micro Station of InterGraph, etc.). Prerequisite: EGS 1110.

**EGS 1110C Engineering Graphics and Design (3).** Introduction to elementary design concepts in engineering, principles of drawing, descriptive geometry, pictorials and perspectives and their computer graphics counterpart.

**ENV 3001 Introduction to Environmental Engineering (3).** Introduction to environmental engineering problems; water and wastewater treatment, air pollution, noise, solid and hazardous wastes. Prerequisite: CWR 3103 or permission of instructor. Corequisite: ENV 3001L.

**ENV 3001L Environmental Laboratory (1).** A corequisite to ENV 3001. Practical applications of the theory learned in the course and experience in detecting and measuring some environmental problems. Prerequisite: CWR 3103 or permission of instructor. Corequisite: ENV 3001.

**ENV 3949 Co-Op Work Experience (3).** Supervised full-time work experience in engineering field. Limited to students admitted to the co-op program with consent of advisor.

**ENV 4061 Public Health Engineering (3).** Study of the physical, chemical, and biological changes in the environment; and the application of science and engineering to improve environmental quality. Prerequisites: PHY 3049 and CHM 1046.

**ENV 4101 Elements of Atmospheric Pollution (3).** The air pollution problem, causes, sources, and effects. Historical development. Physical, political, and economic factors in its control. Prerequisites: PHY 3049 and CHM 1046.

**ENV 4351 Solid Waste Management (3).** Sources, amounts and charac-

teristics of solid wastes; municipal collection systems; method of disposal; energetic consideration in the recovery and recycle of wastes. Prerequisites: PHY 3049 and CHM 1046.

**ENV 4401 Water Supply Engineering (3).** Quantity, quality, treatment, and distribution of drinking water. Prerequisites: CHM 1046, CWR 3103, and CHM 1046.

**ENV 4401L Water Laboratory (1).** Laboratory exercises in the physical, chemical, and bacteriological quality of potable water. Prerequisites: CHM 1046 and CWR 3103. Corequisite: ENV 4401.

**ENV 4551 Sewerage and Wastewater Treatment (3).** Collection and transportation of wastewater, design of sanitary and storm sewers. Physical, chemical, and biological principles of wastewater treatment. Prerequisite: CHM 1046, ENV 4401, or permission of instructor.

**ENV 4551L Wastewater Laboratory (1).** Laboratory exercises in the physical, chemical, and bacteriological quality of raw and treated wastewaters. Prerequisites: CHM 1046 and CWR 3103. Corequisite: ENV 4551.

**ENV 4930 Special Topics in Environmental Engineering (1-4).** A course designed to give groups of students an opportunity to pursue special studies not otherwise offered.

**ENV 4949 Co-Op Work Experience (3).** Supervised full-time work experience in engineering field. Limited to students admitted to the co-op program with consent of advisor. Evaluation and reports required.

**SUR 3101 Surveying (3).** Computations and field procedures associated with the measurement of distances and angles using tape, level, transit, EDMs, and total station. Laboratory is included with field measurements.

**SUR 4201 Route Surveying and Design (4).** To introduce the student to the current design concepts criteria and techniques in geometric design of highways. The theory, field collection of data, office calculations, the design and drawings required for the geometric design of a highway. Prerequisite: COP 3112.

**TTE 4201 Transportation and Traffic Engineering (3).** Transportation characteristics; transportation planning, traffic control devices, intersection design, network design, research. Prerequisites: STA 3033 and SUR 4201.

## Electrical and Computer Engineering

**James Story**, *Associate Professor and Chairperson*
**Malek Adjouadi**, *Assistant Professor*
**Jean Andrian**, *Associate Professor*
**Tadeusz Babij**, *Associate Professor*
**Manuel Cereijo**, *Professor*
**Mark Hagmann**, *Associate Professor*
**Malcolm Helmer**, *Associate Professor*
**W. Kinzy Jones**, *Associate Professor*
**Grover Larkins**, *Assistant Professor*
**Edward Lee**, *Professor*
**Osama Mohammed**, *Professor*
**Dong Park**, *Assistant Professor*
**Gustavo Roig**, *Associate Professor*
**Laura Ruiz**, *Instructor*
**Pierre Schmidt**, *Professor*
**Frank Urban**, *Associate Professor*
**Kang Yen**, *Associate Professor*

### Bachelor of Science in Electrical Engineering

The Electrical Engineering curriculum provides an emphasis toward engineering concepts and design in the varied and rapidly expanding fields of electrical engineering with the fundamental core subjects of the engineering program. The Department of Electrical Engineering seeks to attract students who possess a verbal and written command of the English language, who exhibit logical thinking, creativity, imagination, and persistence. They should have proved their academic excellence in mathematics, chemistry, and physics.

At the undergraduate level, the basic required program of instruction in fundamental theory and laboratory practice is balanced by a broad range of electives in such fields as computers, communication systems, control systems, power systems, and integrated electronics. Students, with the counsel and guidance of faculty advisers, design their electives program around their own special interest.

Any course taken without the required prerequisites and corequisites will be dropped automatically before the end of the term, resulting in a grade of 'DR' or 'DF'.

Students must earn a minimum grade of 'C' in Multivariable Calculus, Differential Equations, Physics II and all EEL courses required for graduation.

Students who have been dismissed for the first time from the University due to low grades, may appeal to the Dean for reinstatement. A second dismissal results in no possibility of reinstatement.

### Lower Division Preparation

To qualify for admission to the program, FIU undergraduates must have met all the lower division requirements including CLAST, completed 60 semester hours, and must be otherwise acceptable into the program. For transfer applicants, at least 60 hours in pre-engineering which includes FORTRAN, Calculus I & II, Physics I & II with Calculus and Labs, Chemistry I and Lab, Statics, English Composition I & II, a two course sequence from the same discipline subject area in Social Science (Economics), and a two course sequence from the same discipline subject area in Humanities, a Gordon Rule course, and Engineering Graphics (unless previously taken in high school). A minimum grade of 'C' is required in all calculus, physics, chemistry, and differential equations, with an overall GPA of 2.5 in these courses. See the example semester-by-semester program on the following pages.

### Upper Division Program

The program includes Dynamics, Engineering Economy, Professional Ethics, Speech and Technical Writing, Advanced Humanities or Social Science, Differential Equations, Multivariable Calculus, Materials of Engineering, Signals and Systems, electives, and the following major courses:

**Electrical Engineering Curriculum** (Major only): (52 )

| | | |
|---|---|---|
| EEL 3111 | Circuits I | 3 |
| EEL 3111L | Circuits Lab | 1 |
| EEL 3112 | Circuits II | 3 |
| EEL 3303 | Electronics I | 3 |
| EEL 3303L | Electronics I Lab | 1 |
| EEL 3396 | Introduction to Solid State | 3 |
| EEL 3514 | Communication Systems | 3 |
| EEL 3657 | Control Systems | 3 |
| EEL 3712 | Logic Design I | 3 |
| EEL 3712L | Logic Design I Lab | 1 |
| EEL 4011C | Electrical Engineering Systems Design | 3 |
| EEL 4304 | Electronics II | 3 |
| EEL 4304L | Electronics II Lab | 1 |
| EEL 4213 | Power Systems I | 3 |
| EEL 4213L | Energy Conversion Lab | 1 |
| EEL 4314 | Integrated Circuits and Systems | 3 |
| EEL 4314L | Integrated Circuits and Systems Lab | 1 |
| EEL 4410 | Fields and Waves | 3 |
| EEL 4611L | Systems Lab | 1 |
| EEL 4709 | Computer Design | 3 |
| Electrical Engineering Electives (two courses) | | 6 |

## Electrical Engineering Program

**First Semester:** (17)

| | | |
|---|---|---|
| MAC 3311 | Calculus I | 3 |
| CHM 1045 | General Chemistry I | 4 |
| CHM 1045L | General Chemistry Lab I | 1 |
| ENC 1101 | Freshmen Composition | 3 |
| Engineering Drawing[1] | | 0 |
| Modern Language I | | 5 |
| Introduction to Engineering course | | 1 |

[1]Engineering Drawing is required unless previously taken in high school.

**Second Semester:** (16)

| | | |
|---|---|---|
| MAC 3312 | Calculus II | 5 |
| PHY 3048 | Physics with Calculus | 5 |
| PHY 3048L | General Physics Lab I | 1 |
| Modern Language I | | 5 |

**Suggested Summer Term:** (9)

| | | |
|---|---|---|
| ENC 1102 | Techniques of Interpretation | 3 |
| One Social Science course (Economics) | | 3 |
| CGS 3420 | Programming for Engineers | 3 |

**Third Semester:** (18)

| | | |
|---|---|---|
| PHY 3049 | Physics with Calculus | 5 |
| PHY 3049L | Physics Lab | 1 |
| EGN 3311 | Statics | 3 |
| MAC 3313 | Multivariable Calculus | 3 |
| One Historical Analysis course | | 3 |
| EGN 2030 | Ethics and Legal Issues | 3 |

**Fourth Semester:** (15)

| | | |
|---|---|---|
| MAP 3302 | Differential Equations | 3 |
| EGN 3321 | Dynamics | 3 |
| EIN 3354 | Engineering Economy | 3 |
| Literature/Art/Drama/Music course | | 3 |
| PHI 2011 | Philosophical Analysis | 3 |

**Fifth Semester:** (16)

| | | |
|---|---|---|
| EEL 3135 | Signal & Systems | 3 |
| EEL 3111 | Circuit I | 3 |
| EEL 3111L | Circuit I Lab | 1 |
| EEL 3396 | Introduction to Solid State | 3 |
| ESI 4556 | Industrial and Systems Engineering in the Office | 3 |
| EGN 3365 | Materials in Engineering | 3 |

**Sixth Semester:** (17)

| | | |
|---|---|---|
| EEL 3112 | Circuits II | 3 |
| EEL 3303 | Electronics I | 3 |
| EEL 3303L | Electronics I Lab | 1 |
| EEL 3514 | Communication Systems | 3 |
| EEL 3712 | Logic Design I | 3 |
| EEL 3712L | Logic Design I Lab | 1 |
| EEL 4410 | Introduction to Field and Waves | 3 |

**Seventh Semester:** (18)

| | | |
|---|---|---|
| EEL 4213 | Power Systems I | 3 |
| EEL 4213L | Energy Conversion Lab | 1 |
| EEL 3657 | Control Systems I | 3 |
| EEL 4304 | Electronics II | 3 |
| EEL 4304L | Electronics II Lab | 1 |
| EEL 4709 | Computer Design | 3 |
| EEL 4011C | Electrical Engineering Systems Design | 1 |
| EE Elective | | 3 |

**Eighth Semester:** (13)

| | | |
|---|---|---|
| EE Elective | | 3 |
| EEL 4314 | Integrated Circuits | 3 |
| EEL 4314L | Integrated Circuits Lab | 1 |
| EEL 4011C | EE Systems Design | 2 |
| EEL 4611L | Systems Laboratory | 1 |
| World Prospects and Issues course | | 3 |

## Bachelor of Science Computer Engineering

The curriculum structure provides an in depth study of the major areas of computer engineering by providing a strong mathematical foundation, a balanced view of hardware and software design and application techniques. The goals and objectives of the program are to train students in the skills of the electrical engineer, specialized in the design and application of both computer hardware and software.

Any course taken without the required prerequisites and corequisites will be dropped automatically before the end of the term, resulting in a grade of 'DR' or 'DF'.

Students must earn a minimum grade of 'C' in Multivariable Calculus, Differential Equations, Physics II and all EEL courses required for graduation.

Students who have been dismissed for the first time from the University due to low grades, may appeal to the Dean for reinstatement. A second dismissal results in no possibility of reinstatement.

The lower division preparation for transfer students seeking a degree in computer engineering is the same as for those pursuing a degree in electrical engineering with the exception of FORTRAN.

The upper division program includes Engineering Economy, Professional Ethics, Advanced Humanities or Social Science, Differential Equations, Multivariable Calculus, Speech and Technical Writing, Signals and Systems, and the following courses:

**Computer Software Curriculum:** (21)

| | | |
|---|---|---|
| CIS 4610 | Introduction to Software Engineering | 3 |
| COP 2210 | Programming in Pascal | 3 |
| COP 3212 | Intermediate Programming | 3 |
| COP 3400 | Assembly Language Programming (VAX) | 3 |
| COP 3530 | Data Structures | 3 |
| COP 4610 | Operating Systems Principles | 3 |
| COP 4225 | Systems Programming in Unix | 3 |

**Electrical Engineering Curriculum:** (26)

| | | |
|---|---|---|
| EEL 3111 | Circuits I | 3 |
| EEL 3111L | Circuits I Lab | 1 |
| EEL 3112 | Circuits II | 3 |
| EEL 3303 | Electronics I | 3 |
| EEL 3303L | Electronics I Lab | 1 |
| EEL 3514 | Communication Systems | 3 |
| EEL 3657 | Control Systems | 3 |
| EEL 4304 | Electronics II | 3 |
| EEL 4304L | Electronics II Lab | 1 |
| EEL 4314 | Integrated Circuits | 3 |
| EEL 4314L | Integrated Circuits Lab | 1 |
| EEL 4611L | Systems Lab | 1 |

**Computer Hardware Curriculum:** (17)

| | | |
|---|---|---|
| EEL 3712 | Logic Design I | 3 |
| EEL 3712L | Logic Design Lab | 1 |
| EEL 4011C | Electrical Engineering Systems Design | 3 |
| EEL 4709 | Computer Design | 3 |
| EEL 4746 | Microcomputers I | 3 |
| EEL 4746L | Microcomputers I Lab | 1 |
| EEL 4747 | Microcomputers II | 3 |

## Computer Engineering Program

**First Semester:** (17)

| | | |
|---|---|---|
| MAC 3311 | Calculus I | 3 |
| CHM 1045 | General Chemistry I | 4 |
| CHM 1045L | Gen. Chemistry Lab I | 1 |
| ENC 1101 | Freshman Composition | 3 |
| Modern Language I course | | 5 |
| Engineering Drawing[1] | | 0 |
| Introduction to Engineering course | | 1 |

[1]Engineering Drawing is required unless previously taken in high school.

**Second Semester:** (16)

| | | |
|---|---|---|
| MAC 3312 | Calculus II | 5 |
| PHY 3048 | Physics with Calculus | 5 |
| PHY 3048L | General Physics Laboratory I | 1 |
| Modern Language II course | | 5 |

**Suggested Summer Term:** (12)

| | | |
|---|---|---|
| ENC 1102 | Techniques of Interpretation | 3 |
| Social Science Course (Economics) | | 3 |
| COP 2210 | Programming in Pascal | 3 |
| Literature/Art/Drama/Music course | | 3 |

**Third Semester:** (18)

| | | |
|---|---|---|
| COP 3212 | Intermediate Programming | 3 |
| PHY 3049 | Physics with Calculus | 5 |
| PHY 3049L | General Physics Lab II | 1 |

| | | |
|---|---|---|
| EGN 3311 | Statics | 3 |
| One Historical Analysis course | | 3 |
| MAC 3313 | Multivariable Calculus | 3 |

**Fourth Semester:** (16)

| | | |
|---|---|---|
| MAP 3302 | Differential Equations | 3 |
| EGN 2030 | Ethics and Legal Issues | 3 |
| EEL 3111 | Circuits I | 3 |
| EEL 3111L | Circuits I Lab | 1 |
| EIN 3354 | Engineering Economy | 3 |
| PHI 2011 | Philosophical Analysis course | 3 |

**Fifth Semester:** (16)

| | | |
|---|---|---|
| EEL 3135 | Signals and Systems | 3 |
| EEL 3712 | Logic Design I | 3 |
| EEL 3712L | Logic Design Lab I | 1 |
| ESI 4556 | Industrial & Systems Engineering in the Office | 3 |
| COP 3400 | Assembly Language | 3 |
| World Prospects and Issues course | | 3 |

**Sixth Semester:** (16)

| | | |
|---|---|---|
| COP 3530 | Data Structures | 3 |
| EEL 3112 | Circuits II | 3 |
| EEL 3303 | Electronics I | 3 |
| EEL 3303L | Electronics I Lab | 1 |
| EEL 3514 | Communication Systems | 3 |
| EEL 4709 | Computer Design | 3 |

**Seventh Semester:** (15)

| | | |
|---|---|---|
| CIS 4610 | Introduction to Software Engineering | 3 |
| EEL 3657 | Control Systems I | 3 |
| EEL 4304 | Electronics II | 3 |
| EEL 4304L | Electronics II Lab | 1 |
| EEL 4746 | Microcomputers I | 3 |
| EEL 4746L | Microcomputers I Lab | 1 |
| EEL 4011C | EE System Design | 1 |

**Eigth Semester:** (16)

| | | |
|---|---|---|
| COP 4225 | Unix and C | 3 |
| COP 4610 | Operating Systems | 3 |
| EEL 4314 | Integrated Circuits | 3 |
| EEL 4314L | Integrated Circuits Lab | 1 |
| EEL 4011C | EE System Design | 2 |
| EEL 4611L | Systems Lab | 1 |
| One Advised EE Elective | | 3 |

## Course Descriptions

**Definition of Prefixes**

EEL - Engineering: Electrical

**CDA 4400 Computer Hardware Analysis (3).** The study of hardware functions of a basic computer. Topics include logic elements, arithmetic logic units, control units, memory devices, organization and I/O devices (for non-EE majors only). Prerequisites: CDA 4101 and MAD 3104.

**EEL 3003 Electrical Engineering I (3).** For non-EE majors. Basic principles of DC and AC circuit analysis, electronic devices and amplifiers, digital circuits, and power systems. Prerequisite: MAC 3312. Corequisite: MAP 3302.

**EEL 3111 Circuits I (3).** Introductory electronics course dealing with DC, AC and transient electrical circuit analysis, involving passive elements such as resistors, capacitors, inductors, transformers, etc. Prerequisites: MAC 3312 and PHY 3049. Corequisites: MAP 3302, FORTRAN and EEL 3111L.

**EEL 3111L Circuits Lab (1).** This lab introduces basic test equipment; oscilloscopes, multimeters, power supply, function generator, etc., and uses this equipment in various experiments on resistors, capacitors, and inductors. Prerequisite: EEL 3049L. Corequisite: EEL 3111.

**EEL 3112 Circuits II (3).** Application of operational methods to the solution of electrical circuit effect of poles and zeroes on the response and transfer function of electrical networks. Laplace and Fourier transforms; network parameters. Prerequisites: EEL 3111, MAP 3302, FORTRAN, and EEL 3135.

**EEL 3135 Signals and Systems (3).** Use of Fourier analysis in electrical and electronic systems. Introduction to probability theory, linear algebra and complex variables. Prerequisites: MAC 3313 and MAP 3302.

**EEL 3160 Computer Applications in Electrical Engineering (3).** Interactive techniques of computers to simulate and design electrical engineering circuits and systems. Prerequisites: Permission of instructor and FORTRAN.

**EEL 3303 Electronics I (3).** Introductory electronics course dealing with the properties of basic electronic devices such as diodes, transistors, Fets, SCRs, etc., and their circuit applications. Prerequisites: EEL 3111 and FORTRAN. Corequisites: EEL 3303L.

**EEL 3303L Electronics I Laboratory (1).** Designing, building, and testing electronic circuits which use diodes, transistors and field effect transistors. Prerequisite: EEL 3111L. Corequisite: EEL 3303.

**EEL 3396 Introduction to Solid State Devices (3).** Introduction to the physics of semiconductors; charge carrier statistics and charge transport in crystalline solids. Basic operations of solid state devices including p-n junction diode, and the bipolar junction transistor. Prerequisite: MAP 3302. Corequisite: EEL 3111.

**EEL 3514 Communication Systems (3).** An introductory course in the field of analog communication systems. Transmitters, receivers, and different modulation and demodulation techniques are studied. A basic treatment of noise is also included. Prerequisite: EEL 3135. Corequisite: EEL 3112.

**EEL 3657 Control Systems I (3).** Analysis of linear time-invariant feedback control systems. System modeling, time and frequency-domain response, stability and accuracy. Analysis by use of Root- Locus, Bode plots, Nyquist diagram. Prerequisite: EEL 3112.

**EEL 3712 Logic Design I (3).** Boolean Algebra. Binary number systems. Combinational logic design using SSI, MSI and LSI. Sequential logic design. Prereq-uisite: EEL 3111. Corequisite: EEL 3712L.

**EEL 3712L Logic Design I Lab (1).** Laboratory experiments, including gates, combinational networks, SSI, MSI, LSI, and sequential logic design. Prerequisite: 3111L. Corequisite: EEL 3712.

**EEL 3949 Co-op Work Experience (3).** Supervised full-time work experience in engineering field. Limited to students admitted to the co-op program with consent of advisor. Evaluation and reports required. Prerequisite: Sophomore year.

**EEL 4011C Electrical Engineering Systems Design (1-3).** Design of a complete EE system including use of design methodology, formulation, specifications, alternative solutions, feasibility, economic, reliability, safety ethics, and social impact. Prerequisites: Senior standing and two EE electives.

**EEL 4140 Filter Design (3).** Approximation techniques. Active RC second order modules. Low pass filters, bandpass filters, high pass filters, notch filters are studied in detail. Sensitivity and high order filters. Design and laboratory implementation. Prerequisites: EEL 3657, EEL 4304, or permission of instructor.

**EEL 4213 Power System I (3).** Introductory course to power systems components; transformer, induction machines, synchronous machines, direct current machines, and special machines. Prerequisite: EEL 4410. Corequisites: EEL 3112 and EEL 4213L.

**EEL 4213L Energy Conversion Lab (1).** Operation, testing, and applications of energy conversion machines including AC and DC motors and generators.

Starts with experiments on magnetic circuits and transformers. Prerequisite: EEL 4410. Corequisite: EEL 4213.

**EEL 4214 Power Systems II (3).** Transmission line models, the bus admittance matrix, load flow studies and solution techniques, economic dispatch with and without losses, computer applications. Prerequisite: EEL 4213.

**EEL 4215 Power Systems III (3).** Short circuit calculations, symmetrical and unsymmetrical fault analysis, transient stability and dynamic studies as well as power system control. Computer applications. Prerequisite: EEL 4214.

**EEL 4304 Electronics II (3).** Second course in electronics with particular emphasis on equivalent circuit representation and analysis of electronic analog and switching circuits and systems, their frequency response and behavior under feedback control. Prerequisites: EEL 3112 and EEL 3303. Corequisite: EEL 4304L.

**EEL 4304L Electronics II Laboratory (1).** Design and measurement experiments of advanced electronics, including applications of integrated circuits. Prerequisite: EEL 3303L. Corequisite: EEL 4304.

**EEL 4306 Electrical Engineering II (3).** Electronic circuits. Transistors, FET. Equivalent circuits. Operational amplifiers. Basic digital circuits. Energy conversions. Transformers. Machinery. For non-EE majors only. Prerequisite: EEL 3003

**EEL 4314 Integrated Circuits and Systems (3).** Laboratory experiments in integrated circuits. Includes design of RF systems, analog integrated systems, A/D and D/A systems. Prerequisite: EEL 4304. Corequisite: EEL 4314L.

**EEL 4314L Integrated Circuits Laboratory (1).** Laboratory experiments in integrated circuits. Includes design of RF systems, analog integrated systems, and A/D and D/A systems. Prerequisite: EEL 4304L. Corequisite: EEL 4314.

**EEL 4410 Introduction to Fields and Waves (3).** Static electric field, the steady electric current, magnetic field of ferro magnetic materials. The relation between field and circuit theory waves and wave polarization, reflection, refraction, and diffraction. Prerequisite: EEL 3111.

**EEL 4461C Antennas (3).** Introduction to linear antennas, linear arrays and aperture antennas. Far field pattern calculation and measurement techniques. Prerequisite: EEL 3514 or permission of instructor.

**EEL 4510 Introduction to Digital Signal Processing (3).** Z transform. Continuous and digital filters. Design of digital filters. Effects of finite register length in digital filters. Engineering applications of digital filters. Prerequisite: EEL 3514 or permission of instructor.

**EEL 4515 Advanced Communication Systems (3).** Advanced senior level course designed for those students who desire to enhance their engineering knowledge in communication systems. State-of-the-art techniques in FM, digital communication, phase locked loops, noise treatment, threshold improvement, etc. Prerequisites: EEL 3514, EEL 4304 or permission of instructor.

**EEL 4611 Control Systems II (3).** Design by Root-Locus, Bode plot, and Buillin-Truxal approach; characteristics of some typical industrial controllers and sensors. Computer simulation and other modern topics are included. Prerequisite: EEL 3657 or permission of instructor.

**EEL 4611L Systems Laboratory (1).** Laboratory experiments in various systems. Includes position and velocity control systems, zeroth order, first order, and second order systems. Communication Systems. Use of analog computer to simulate and/or solve systems. Prerequisites: EEL 3657 and EEL 3514.

**EEL 4709 Computer Design (3).** Computer architecture, arithmetic units, RAM, ROM, tape, disk, CPU, memory systems, data, input/output devices. Distributed and centralized control. Prerequisites: EEL 3712 and EEL 3712L.

**EEL 4713 Digital Logic Design II (3).** Upper division course in system design using state-of-the-art digital integrated circuits and concepts leading to realization of practical digital electronic systems. Prerequisite: EEL 4746 or permission of instructor.

**EEL 4746 Microcomputers I (3).** RAM, ROM, and CPU architecture. Instruction set. Timing sequences. Sub-routines. Interrupts. Peripherals. Applications. System design. Prerequisite: EEL 4709 or permission of instructor. Corequisite: EEL 4746L .

**EEL 4746L Microcomputers I Laboratory (1).** Hands-on design experience with microcomputer systems and applications including buses, interfaces, and in-circuit emulation. Prerequisite: EEL 4709. Corequisite: EEL 4746.

**EEL 4747 Microcomputers II (3).** Design of interfacing schemes of microcomputers such as video, disk, etc., and state-of-the-art hardware and software features of advanced microprocessors' families. Prerequisite: EEL 4746 or permission of instructor.

**EEL 4905 Individual Problems in Electrical Engineering (1-3).** Selected problems or projects in the student's major field of electrical engineering. It can be extended to a maximum of six hours. Student works independently with a minor advisement from designated faculty member. Prerequisites: Senior level and permission of instructor.

**EEL 4930 Special Topics in Electrical Engineering (1-3).** Special topics in electrical engineering not covered in other courses. Prerequisite: Permission of instructor.

**EEL 4949 Co-Op Work Experience (3).** Practical co-op engineering work under approved industrial supervision. Prerequisite: EEL 3949.

**ELR 4202C Medical Instrumentation Design (4).** Concepts of transducers and instrumentation systems; origins of biopotentials; electrical safety; therapeutic and prosthetic devices. Prerequisite: EEL 4304 or permission of instructor.

## Industrial and Systems Engineering

**Fredrick Swift,** *Professor and Chairperson*
**Hector Carrasco,** *Assistant Professor*
**Chin-Sheng Chen,** *Associate Professor*
**Khoklat Kengskool,** *Associate Professor*
**Shih-Ming Lee,** *Associate Professor*
**Menberu Lulu,** *Associate Professor*
**Sergio Martinez,** *Senior Lecturer and Acting Associate Chairperson*
**German Nunez,** *Associate Professor*
**Milton Torres,** *Lecturer*

As defined by the Institute of Industrial Engineers, Industrial Engineering is "concerned with the design, improvement and installation of integrated systems of people, materials, information, equipment and energy." A major distinction between industrial engineering and other branches of engineering is that the industrial engineer must consider not only the behavior of inanimate objects as they are governed by physical laws but also the behavior of people as they operate together in organizations,

and as such it is often called the "people oriented engineering discipline."

The program has a very modern component which emphasizes the sophisticated areas of simulation and modeling, automation and robotics, and flexible manufacturing systems. It is also soundly based in the traditional industrial engineering areas such as work measurement and simplification, probability and statistics, and facility and work place design.

## Bachelor of Science in Industrial Engineering

### Lower Division Preparation

Students entering FIU with fewer than 48 transfer hours must satisfy all Core Curriculum Requirements while students transferring to FIU with at least 48 hours must satisfy the General Education Requirements. To qualify for admission to the Industrial Engineering upper division program, students must have passed the CLAST and completed at least 60 semester hours of pre-engineering courses which include Calculus I & II, Multivariable Calculus, Differential Equations, Statistics, Chemistry I and Lab, and Physics I & II with Calculus and Labs.

### Upper Division Program

The program includes 21 semester hours of General Engineering courses, 46 semester hours of required Industrial Engineering courses, and 6 to 12 hours of technical electives (students transferring to FIU with at least 48 credit hours are required to complete 12 hours of technical electives).

**General Engineering:** (21)

| | | |
|---|---|---|
| EEL 3003 | Electrical Engineering I | 3 |
| EGN 3311 | Statics | 3 |
| EGN 3321 | Dynamics | 3 |
| EGN 3343 | Thermodynamics I | 3 |
| EGN 3365 | Materials in Engineering | 3 |
| EIN 3354 | Engineering Economy | 3 |
| Programming Language | | 3 |

**Industrial Engineering Core Courses:** (46)

| | | |
|---|---|---|
| EGN 3123 | Computer Assisted Drawing | 3 |
| EIN 4314 | Work Design | 3 |
| EIN 4314L | Work Design Lab | 1 |
| EIN 3365 | Facilities Planning | 5 |
| EIN 3390 | Manufacturing Processes | 3 |
| EIN 3390L | Manufacturing Processes Lab | 1 |
| EIN 4334 | Production Planning & Control | 3 |
| EIN 3331 | Quality Control | 3 |
| EIN 3600 | Introduction to Robotics | 3 |
| EIN 3600L | Introduction to Robotics Lab | 1 |
| EIN 4243 | Human Factors in Engineering | 3 |
| EIN 4243L | Human Factors Lab | 1 |
| ESI 3161 | Industrial Applications of Microprocessors | 3 |
| ESI 3314 | Generic Models | 3 |
| ESI 3523 | Simulation Models | 3 |
| ESI 3523L | Simulation Lab | 1 |
| ESI 4451 | Project Management | 3 |
| ESI 4554 | ISE Systems Design | 3 |

**Industrial Engineering Electives**
(select at least two courses)

| | | |
|---|---|---|
| EIN 3102 | Collective Bargaining | 3 |
| EIN 3214 | Safety in Engineering | 3 |
| EIN 3399 | Industrial Shop & Manufacturing Practices | 3 |
| EIN 3949 | Industrial Engineering Co-Op | 3 |
| EIN 4116 | Industrial Information Systems | 3 |
| EIN 4122 | Industrial Marketing | 3 |
| EIN 4261 | Industrial Hygiene | 3 |
| EIN 4326 | Industrial Research and Development | 3 |
| EIN 4333 | Productivity Planning | 3 |
| EIN 4387 | Technology Assessment | 3 |
| EIN 4389 | Technological Forecasting | 3 |
| EIN 4391 | Design for Automation | 3 |
| EIN 4395 | Computer Integrated Manufacturing | 3 |
| EIN 4933 | Special Topics | 3 |
| EIN 4949 | Co-Op Work Experience | 3 |
| EIN 5322 | Engineering Management | 3 |
| EIN 5332 | Quality Engineering | 3 |
| EIN 5350 | Industrial Financial Decisions | 3 |
| EIN 5605 | Robotic Assembly Cells | 3 |
| ESI 4556 | Industrial & Systems Engineering in the Office | 3 |

**Specielization Areas**

Four concentration areas are available to students majoring in Industrial Engineering:

1. Engineering Management
2. Ergonomics
3. Manufacturing Engineering
4. Systems Engineering

### Industrial Engineering Program

**First Semester:** (17)

| | | |
|---|---|---|
| MAC 3311 | Calculus I | 3 |
| CHM 1045 | General Chemistry I | 4 |
| CHM 1045L | General Chemistry I Lab | 1 |
| ENC 1101 | Freshman Composition | 3 |
| Modern Language I course | | 5 |
| Introduction to Engineering course | | 1 |

**Second Semester:** (16)

| | | |
|---|---|---|
| MAC 3312 | Calculus II | 5 |
| PHY 3048 | Physics with Calculus | 5 |
| PHY 3048L | General Physics Lab I | 1 |
| Modern Language II course | | 5 |

**Suggested Summer Term:** (12)

| | | |
|---|---|---|
| ENC 1102 | Techniques of Interpretation | 3 |
| Social Science I course | | 3 |
| Literature/Art/Drama/Music course | | 3 |
| World Prospects and Issues course | | 3 |

**Third Semester:** (15)

| | | |
|---|---|---|
| MAP 3302 | Differential Equations | 3 |
| PHY 3049 | Physics with Calculus | 5 |
| PHY 3049L | General Physics Lab II | 1 |
| EGN 3311 | Statics | 3 |
| Historical Analysis course | | 3 |

**Fourth Semester:** (15)

| | | |
|---|---|---|
| MAC 3313 | Multivariable Calculus | 3 |
| EGN 3321 | Dynamics | 3 |
| Computer Language course | | 3 |
| STA 3033 | Introduction to Probabiltiy and Statistics | 3 |
| Philosophical Analysis course | | 3 |

**Fifth Semester:** (16)

| | | |
|---|---|---|
| EIN 3354 | Engineering Economy | 3 |
| EIN 3331 | Quality Control | 3 |
| EIN 4243 | Human Factors | 3 |
| EIN 4243L | Human Factors Lab | 1 |
| ESI 3314 | Generic Models | 3 |
| ESI 3161 | Industrial Applications of Microprocessors | 3 |

**Sixth Semester:** (18)

| | | |
|---|---|---|
| EGN 3365 | Materials in Engineering | 3 |
| EIN 3390 | Manufacturing Process | 3 |
| EIN 3390L | Manufacturing Process lab | 1 |
| EIN 3600 | Introduction to Robotics | 3 |
| EIN 3600L | Robotics Lab | 1 |
| EIN 4314 | Work Design | 3 |
| EIN 4314L | Work Design Lab | 1 |
| EGN 3123 | Computer Assisted Drawing | 3 |

**Seventh Semester:** (18)

| | | |
|---|---|---|
| EIN 3365 | Facility Planning | 5 |
| EIN 4334 | Production Planning and Control | 3 |
| ESI 3523 | Simulation Models of Industrial System | 3 |
| ESI 3523L | Simulation Models of Industrial System Lab | 1 |
| ESI 4451 | Project Management Systems Design | 3 |
| EGN 3343 | Thermodynamics | 3 |

**Eighth Semester:** (15)

| | | |
|---|---|---|
| EEL 3003 | Electrical Engineering I | 3 |
| ESI 4554 | ISE System Design | 3 |
| IE Elective | | 3 |

| | |
|---|---|
| IE Elective | 3 |
| Social Science II course | 3 |

## Course Descriptions

### Definition of Prefix

EIN - Engineering: Industrial; ESI - Engineering Systems Industrial.

**EGN 3123 Computer Assisted Drawing and Design (3).** Application of computer assisted design technology to product design, feasibility study and production drawing. Prerequisite: EGN 1120.

**EIN 1396C Basic Industrial Shop and Manufacturing Practices (3).** Fundamentals of basic capabilities and requirements for a modern shop or industrial manufacturing facilities. Rudiments of safety requirements, wood technology, metal technology and plastic technology.

**EIN 3102 Collective Bargaining in Industrial Systems (3).** A comprehensive study of collective bargaining with emphasis upon the private sector. Included will be negotiations and scope of contracts, day-to-day contract administration, and major bargaining issues.

**EIN 3214 Safety in Engineering (3).** Introduces occupational safety and health hazards associated with mechanical systems, materials handling, electrical systems, and chemical processes. Illustrates controls through engineering revision, safeguarding, and personal protective equipment. Emphasis placed on recognition, evaluation and control of occupational safety and health hazards.

**EIN 3331 Quality Control (3).** Modern concepts for managing the quality function of industry to maximize customer satisfaction at minimum quality cost. The economics of quality, process control, organization, quality improvement, and vendor quality. Prerequisite: Statistics

**EIN 3354 Engineering Economy (3).** Methods of economic analysis in engineering including decision problems, value measurement, interest relationships, criteria for decisions under certainty, risk and uncertainty.

**EIN 3365 Facilities Planning and Materials Handling (5).** Application of methods and work measurement principles to the design of work stations. Integration of work stations with storage and material handling systems to optimize productivity. Prerequisite: EGN 1120 or equivalent.

**EIN 3390 Manufacturing Processes (3).** Study of interrelationships among materials, design and processing and their impact on workplace design, productivity and process analysis for the industrial engineer. Prerequisites: Permission of instructor, EGN 3365 or equivalent.

**EIN 3390L Manufacturing Processes Laboratory (1).** Experiments are conducted using the machines, equipment and tools in the laboratory to provide students with hands-on experience on product design, process planning, fabrication and quality assurance. Corequisite: EIN 3390.

**EIN 3600 Introduction to Robotics (3).** Basic concepts of industrial robots; technology, performance characteristics, criteria for use, failure/success of industrial experiences; planning, selection, and implementation. Open to non-majors. Prerequisite: STA 3033 or equivalent and computer programming language.

**EIN 3600L Introduction to Robotics Laboratory (1).** Experiments in the use of CNC machines and robots demonstrating performance characteristics of CNC equipment and robotic arms. Corequisite: EIN 3600.

**EIN 3604L Robotic Assembly Cell Laboratory (1).** Robot Programming using AML/E and AML Robotic Languages to determine repeatability, accuracy, compliance, and other characteristics of Robotic Equipment. Prerequisite: EIN 3600.

**EIN 3949 Industrial Engineering Co-Op (3).** Entry level work experience as an Industrial Engineering intern. Jointly supervised by IE and Industry personnel. Written report required. Student must obtain approval from IE faculty and sign up for course before starting work. Prerequisite: Approval of advisor.

**EIN 4116 Industrial Information Systems (3).** The integration of information flows and data bases with the production planning and control systems into productive and manageable systems. Prerequisite: ESI 3161.

**EIN 4122 Industrial Marketing (3).** The performance of business activity that directs the flow of goods and services from producer to industrial user. Covers new product development, marketing research, sales engineering, pricing, distribution, and promotion.

**EIN 4243 Human Factors Engineering (3).** Examination of the ways to fit jobs and objects better to the nature and capacity of the human being. Lectures will review man's performance capability, singly and in groups, in interacting with his work environment. Stresses the practical application of human factors principles. Prerequisite: STA 3033.

**EIN 4243L Human Factors in Engineering and Design Laboratory (1).** Experiments are conducted which measure human factors indicators and differences by age, sex, and race, as well as physiological and anatomical differences. Corequisite: EIN 4243.

**EIN 4261 Industrial Hygiene (3).** A continuation of Safety in Industry. An introduction to OSHA regulations on health hazards. Noise, radiation, and dust problems in industry. Special hazards with solvents, asbestos, lead, silica, and other chemicals. OSHA compliance procedures.

**EIN 4314 Work Design (3).** The analysis, design, and maintenance of work methods. Study of time standards, including pre-determined time standards and statistical work sampling. Prerequisite: Junior standing, EIN 4243.

**EIN 4314L Work Design Laboratory (1).** Experiments in the different Work Design techniques including Performance Sampling, Time Studies, Pre-Determined Time Systems and Workplace Design. Corequisite: EIN 4314.

**EIN 4326 Industrial Research and Development (3).** Research and development for new product strategies, technological assessment, patent and product liability, and sales engineering. An independent study product will be required by each student. Prerequisite: Senior status.

**EIN 4333 Productivity Planning (3).** The improvement of productivity as a functional activity of the enterprise. Productivity definitions, measurement, methodologies, and reporting systems. Prerequisites: EIN 3314, ESI 3161, and STA 3033.

**EIN 4334 Production Planning and Control (3).** Basic concepts of input, output, and feedback as they apply to the design of quality, inventory, and production scheduling systems. Prerequisites: EIN 3354, EIN 3365 EIN 3354, EIN 3331 and ESI 3314.

**EIN 4387 Technology Assessment (3).** Development of systematic efforts to anticipate impacts on society that may occur when a technology is introduced, extended, or modified. Prerequisites: Senior standing in Engineering, ESI 3161 and STA 3033.

**EIN 4389 Technological Forecasting (3).** Emphasis on forecasting future trends and specific developments in the area of capabilities and needs. Prerequisites: Senior standing in Engineering, EIN 3393 and EIN 4334.

**EIN 4391 Product Design for Manufacturability and Automation (3).** Design and review of designs of manufactured products. Integration of the product design for function, and the process design for manufacturability. Prerequisites: EIN 3600 and EIN 3390.

**EIN 4395 Computer Integrated Manufacturing (3).** The integration of computer aided design and computer aided manufacturing. Development of a common data base for design and manufacturing. Developments of flexible manufacturing systems. Prerequisites: EIN 3600 and ESI 3523.

**EIN 4933 Special Topics in Industrial Engineering (2-3).** Permits in-depth study in areas relating to specific student interests, recent advances, and problems in industrial technology or systems. Prerequisite: Senior standing, consent of faculty advisor and approval of department chairman.

**EIN 4949 Co-Op Work Experience (3).** Practical co-op work experience under approved industrial supervision. Written report required at the conclusion of the work assignment. Prerequisite: Permission of department chairperson.

**EIN 5115 Survey of Industrial Engineering Basics (3).** Review of the following topics: Human Factors, Work Design, Automation & Robotics, Engineering Economy, Microprocessor Applications and Production Planning and Control.

**EIN 5322 Engineering Management (3).** Organization of engineering systems including production and service organizations. Inputs of human skills, capital, technology, and managerial activities to produce useful products and services.

**EIN 5332 Quality Engineering (3).** This course examines quality control from an engineering standpoint. It covers ways to meet the challenge of designing high-quality products and processes at low cost.

**EIN 5350 Industrial Financial Decisions (3).** The use of financial techniques and data in planning, controlling and coordinating industrial activities. This course will familiarize the student with accounting concepts and analytical methods.

**EIN 5605 Robotic Assembly Cell (3).** Concepts of robot manipulation and sensing, part design for robotic assembly, planning manipulator trajectories, machine vision, robot programming language, cell control, and material transfer.

**ESI 3161 Industrial Applications of Microprocessors (3).** Basic concepts of microprocessors; an overview of computer architecture, local area networks, micro-mainframe linking, and operating systems as they apply to industrial systems. Prerequisite: CGS 3420 or equivalent.

**ESI 3314 Generic Models of Industrial Systems (3).** Modeling principles with emphasis on linear programming and extensions. The simplex procedure and its application through computer software packages. The analysis and interpretation of results in decision making. Prerequisite: MAC 3312.

**ESI 3523 Simulation Models of Industrial Systems (3).** Simulation methodology, design of simulation experiments, implementation of simulation effort through computer software. Application to the solution of industrial and service system problems. Prerequisites: ESI 3161 and STA 3033.

**ESI 3523L Simulation Models of Industrial System Laboratory (1).** Simulation Modeling on a micro-computer. Analyze and validate design models using both a general purpose programming language and a special-purpose simulation language. Prerequisite: STA 3033. Corequisite: ESI 3523.

**ESI 4451 Project Management Systems Design (3).** Project planning, scheduling and control using activity network logic, such as PERT and CPM. Students will be expected to identify and plan an integrative ISE capstone group project using computer software. Prerequisite: ESI 3314.

**ESI 4554 ISE Systems Design (3).** To integrate all prior ISE required courses into a cohesive and consistent professional philosophy. Prerequisite: ESI 4451.

**ESI 4556 Industrial and Systems Engineering in the Office (3).** Paperwork reduction, overhead and expense cost containment, and white collar productivity through office automation and systems analysis.

## Mechanical Engineering

**M. Ali Ebadian,** *Professor and Chairperson*
**S. Chellalah,** *Assistant Professor*
**Wei Jiang,** *Visiting Assistant Professor*
**W. Kinzy Jones,** *Associate Professor*
**Rene Leonard,** *Associate Professor*
**Cesar Levy,** *Associate Professor*
**Ian Radin,** *Visiting Associate Professor*
**Gautam Ray,** *Professor*
**Richard Schoephoerster,** *Visiting Assistant Professor*
**Ebrahim Shirazinedjad,** *Visiting Assistant Professor*
**Fredrick Swift,** *Professor*
**Ibrahim Tansel,** *Assistant Professor*
**Kuang-Hsi Wu,** *Associate Professor*
**Gao Yang,** *Visiting Assistant Professor*
**Tachung Yih,** *Assistant Professor*

The academic program provides a well balanced curriculum in the following two major areas of Mechanical Engineering:

Fluid/Thermal Science

Mechanics and Control of Mechanical and Dynamic Systems

Further specializations in any of the following areas may be obtained by the proper choice of electives:

Environmental and Waste Management

Energy Systems

Heating, Ventilation, and Air Conditioning

Mechanics and Material Sciences

Biomechanics and Bioengineering

Manufacturing Methods

Robotics

Computer Aided Design

The courses in the Manufacturing Methods area and Robotics are offered by both the Mechanical and the Industrial Engineering department. Biomechanics and Biomedical Engineering are inter-disciplinary studies with courses offered by both the Mechanical and Electrical Engineering departments. The courses in the Environmental and Waste Management area are offered by the Mechanical and Civil Engineering Departments.

A Bachelor's degree in Mechanical Engineering provides students the background suitable for immediate employment in the engineering industries, as well as excellent preparation for graduate studies in Engineering, Medicine, Law, or Business Administration.

### Bachelor of Science in Mechanical Engineering

The qualifications for admissions to the Department of Mechanical Engineering

are the same as for admission to the School of Engineering.

The academic program is designed to satisfy the criteria outlined by the Accreditation Board for Engineering and Technology (ABET), as well as to meet the State of Florida's articulation policy. Entering freshmen at FIU should seek advisement from the Undergraduate Studies Office as well as from the Mechanical Engineering department's office of advisement.

The minimum requirements for graduation in Mechanical Engineering consist of two parts: 1) Mathematics, Basic Sciences, Computer Programming, Humanities and Social Sciences requirements, and 2) Engineering Sciences, Engineering Design, Laboratory and Elective requirements. Detailed outlines are given below:

Minimum semester credit hours requirements in the area of Mathematics, Basic Sciences, Humanities, Social Sciences, and Computer Programming:

| | |
|---|---|
| Mathematics, including Elective | 16 |
| Chemistry and Physics with Laboratory | 16 |
| Computer Programming | 3 |
| English, including Technical Writing | 9 |
| Humanities and Social Science | 16 |

In meeting the requirement in Humanities and Social Sciences, the student should take at least two courses which form a coherent sequence.

## Mechanical Engineering Curriculum

Engineering Science, Engineering Design, Laboratory and Elective semester credit hours requirements:

| | | |
|---|---|---|
| EGS 1110 | Engineering Drawing | 3 |
| EGN 3311 | Statics[1] | 3 |
| EGN 3321 | Dynamics[1] | 3 |
| EGN 3365 | Materials in Engineering[1] | 3 |
| EGM 3520 | Engineering Mechanics of Materials | 3 |
| EGM 3520L | Materials Testing Lab | 1 |
| CWR 3201 | Fluid Mechanics | 3 |
| CWR 3201L | Fluid Mechanics Lab | 1 |
| EGN 3343 | Thermodynamics I[1] | 3 |
| EMA 4702 | Topics in Mechanics & Materials Science | 2 |
| EML 3101 | Thermodynamics II | 3 |
| EML 3262 | Kinematics & Mechanisms Design | 2 |
| EML 4220 | Mechanical Vibrations | 3 |
| EML 4312 | Automatic Control Theory | 3 |
| EML 4140 | Heat Transfer | 3 |
| EML 4702 | Fluid Dynamics | 2 |
| EIN 3390 | Manufacturing Processes | 3 |
| EEL 3003 | Electrical Engineering I | 3 |
| EEL 3111L | Circuit Lab | 1 |
| EML 3301L | Instrumentation & Measurement Lab | 1 |
| EEL 4306 | Electrical Engineering II | 3 |
| EML 4906L | Mechanical Lab I | 1 |
| EML 4421L | Mechanical Lab II | 1 |
| EML 3500 | Mechanical Design I | 3 |
| EML 4501 | Mechanical Design II | 3 |
| EML 4905 | Senior Design Project | 4 |
| EML Design Elective | | 3 |
| Technical Elective | | 3 |
| EML or other Elective | | 3 |
| EML 4936 | Mechanical Engineering Seminar[2] | 1 |

[1]These courses are four contact hours to include a one hour non-credit tutorial.

[2]Attendance during the senior year is a requirement for graduation.

A minimum of "C" or better is required for all ME courses in the ME curriculum.

A grade of "C" or better is required for all prerequisites in engineering courses. Any course taken without the required prerequisites and corequisites will be dropped automatically before the end of the term, resulting in a grade of "DR" or "DF".

Students may repeat a course two times only.

Students who are dismissed from the University due to low grades may appeal to the Dean for reinstatement. A second dismissal results in no possibility of reinstatement.

### Laboratories

Over and above the laboratory requirements in Physics and Chemistry, the program consists of seven semester hours of required Engineering laboratory work. The students are assigned three hours of laboratory work (1 hour in Instrumentation and Measurement Lab and one hour each in Mechanical Lab I and II) which are specially devoted to solving design problems by using experimental methods. The laboratory experience includes the following areas: Circuits, Fluid Mechanics, Mechanics of Materials and Materials Testing, Advanced Applications in Fluid and Thermal Science, Instrumentation and Measurement, and Vibration Laboratory.

The elective areas offer the following additional laboratories: Air Conditioning and Refrigeration, Biomedical Engineering, Material Sciences, Computer Aided Design, and Computer Integrated Manufacturing.

### Electives

The four concentration areas of the Mechanical Engineering program with their elective offerings are listed below.

#### Fluids/Thermal Sciences and Energy Systems

| | | |
|---|---|---|
| EML 3450 | Energy Systems | 3 |
| EML 4421 | Internal Combustion Engines | 3 |
| EML 4411 | Mechanical Power Theory | 3 |
| EML 4419 | Propulsion systems | 3 |
| EML 4601 | Refrigeration and A/C Principles | 3 |
| EML 4601L | Refrigeration and A/C Lab | 2 |
| EML 4603 | Air Conditioning Design I | 3 |
| EML 4706 | Design of Thermal and Fluid Systems | 3 |
| EML 4711 | Gas Dynamics | 3 |
| EML 5103 | Intermediate Thermodynamics | 3 |
| EML 5104 | Classical Thermodynamics | 3 |
| EML 5152 | Intermediate Heat Transfer | 3 |
| EML 5709 | Intermediate Fluid Mechanics | 3 |

#### Mechanics, Materials and System Design

| | | |
|---|---|---|
| EGM 3311 | Analysis of Mechanical Systems | 3 |
| EGM 4610 | Introduction to Continuum Mechanics | 3 |
| EGM 5111 | Experimental Stress Analysis | 3 |
| EGM 5351 | Finite Element Methods in Mechanics | 3 |
| EGM 5354 | Finite Element Method Application in Mech Eng | 3 |
| EGM 5533 | Advanced Mechanics of Materials | 3 |
| EGM 5653 | Theory of Elasticity | 3 |
| EMA 3066 | Polymer Science and Engineering | 3 |
| EMA 4121 | Physical Metallurgy | 3 |
| EMA 4121L | Materials Lab | 1 |
| EMA 4223 | Mechanical Metallurgy | 3 |
| EMA 5295 | Principles of Composite Materials | 3 |
| EML 3222 | System Dynamics | 2 |
| EML 3301C | Instrumentation | 3 |
| EML 4260 | Dynamics of Machinery | 3 |
| EML 4535 | Mechanical Computer Aided Design | 3 |
| EML 4561 | Introduction to Electronic Packaging | 3 |
| EML 5125 | Classical Dynamics | 3 |

#### Biomechanics and Biomedical Engineering

| | | |
|---|---|---|
| EEL 5071 | Bioelectrical Models | 3 |
| EEL 5085 | Bioradiation Engineering | 3 |
| EGM 4580 | Principles of Bioengineering | 3 |
| EGM 4580L | Biomedical Engineering Lab | 1 |

| | | |
|---|---|---|
| EGM 4581 | Biomechanics of Cardiovascular Systems | 3 |
| EGM 4582 | Engineering Hemodynamics | 3 |
| EGM 4583 | Orthopaedic Biomechanics | 3 |
| ELR 4202C | Medical Instrumentation | 3 |
| EML 4585 | Design of Biomedical Systems & Devices | 3 |

**Manufacturing Methods/Robotics**

| | | |
|---|---|---|
| EIN 3354 | Engineering Economy | 3 |
| EIN 3600 | Introduction to Robotics | 3 |
| EIN 4391 | Product Design for Manufacturing and Automation | 3 |
| EIN 4395 | Computer Integrated Manufacturing | 3 |
| EML 4535 | Mechanical Computer Aided Design | 3 |
| EML 4561 | Introduction to Electronic Packaging | 3 |

Students must take nine credit hours of electives of which six credit hours must be in the design area. ABET requires a minimum of 16 credit hours to be in the design area.

Students with special needs may take other elective courses (not listed above) with their advisor's permission. Students are not restricted to these four areas but may choose courses, with the advisor's consent, that will form a coherent concentration area. Special topics may be counted as an elective.

**Financial Assistance**

The faculty in the Mechanical Engineering Department is involved in a number of on-going funded research projects. Many graduate students are supported by these projects as research assistants. Additionally, some teaching assistantships, tuition waivers and scholarships are available.

**Areas of Specialization**

Bioengineering/Biomechanics
Computer Aided Design
Computer Integrated Manufacturing
Energy Systems
Finite Elements Analysis
Fluids Mechanics
Fracture Mechanics
Heat Transfer
Material Sciences
Robotics

In order to specialize in the areas of CIM and Robotics, students need to collaborate with the faculty of the Industrial Engineering Department.

## Mechanical Engineering Program Requirements

First Semester: (17)

| | | |
|---|---|---|
| MAC 3311 | Calculus I | 3 |
| CHM 1045 | General Chemistry I | 4 |
| CHM 1045L | General Chemistry I Lab | 1 |
| ENC 1101 | Freshman Composition | 3 |
| Arts course | | 3 |
| Social Science course I (Economics) | | 3 |
| EGS 1110 | Engineering Drawing or | |
| EGN 3123 | Computer Assisted Design | |

**Second Semester:** (18)

| | | |
|---|---|---|
| MAC 3312 | Calculus II | 5 |
| PHY 3048 | Physics I with Calculus | 5 |
| PHY 3048L | General Physics I Lab | 1 |
| CGS 3420 | Programming for Engineers | 3 |
| ENC 1102 | Techniques of Interpretation | 3 |
| Introduction to Engineering course | | 1 |

**Third Semester:** (18)

| | | |
|---|---|---|
| MAC 3313 | Multivariable Calculus | 3 |
| PHY 3049 | Physics II with Calculus | 5 |
| PHY 3049L | General Physics II Lab | 1 |
| EGN 3311 | Statics | 3 |
| EGN 3365 | Materials in Eng | 3 |
| Historical Analysis course | | 3 |

**Fourth Semester:** (16)

| | | |
|---|---|---|
| MAP 3302 | Differential Equations | 3 |
| EGN 3321 | Dynamics | 3 |
| EGM 3520 | Mechanics of Materials | 3 |
| EGM 3520L | Materials Testing Lab | 1 |
| EIN 3390 | Manufacturing Processes | 3 |
| Philosophical Analysis course | | 3 |

**Fifth Semester:** (18)

| | | |
|---|---|---|
| CWR 3201 | Fluid Mechanics | 3 |
| CWR 3201L | Fluid Mechanics Lab | 1 |
| EGN 3343 | Thermodynamics I | 3 |
| EML 3262 | Kinematics and Mechanisms Design | 2 |
| EEL 3003 | Elecrical Engineering I | 3 |
| EEL 3111L | Circuits Lab | 1 |
| EMA 4702 | Topics in Mechanics & Material Science | 2 |
| World Prospects and Issues course | | 3 |

**Sixth Semester:** (18)

| | | |
|---|---|---|
| EML 4220 | Mechanical Vibrations | 3 |
| EML 3301L | Instrumentation and Measurement Lab | 1 |
| EML 3101 | Thermodynamics II | 3 |
| EML 4702 | Fluid Dynamics | 2 |
| Practice Mechanical Engineering course | | 2 |
| EML 3500 | Mechanical Design I | 3 |
| EEL 4306 | Electrical Engineering II | 3 |
| EML 4906L | Mechanical Lab I | 1 |

**Seventh Semester:** (18)

| | | |
|---|---|---|
| EML 4312 | Automatic Control Theory | 3 |
| EML 4140 | Heat Transfer | 3 |
| EML 4905 | Senior Design Project | 1 |
| Elective I | | 3 |
| EML 4501 | Mechanical Design II | 3 |
| Modern Language I course | | 5 |

**Eighth Semester:** (18)

| | | |
|---|---|---|
| EML 4421L | Mechanical Lab II | 1 |
| EML 4905 | Senior Design Project | 3 |
| Elective II | | 3 |
| EML 4936 | Mechanical Engineering Seminar | 0 |
| EML 4000-level Design Elective course | | 3 |
| Mathematics Elective | | 3 |
| Modern Language II course | | 5 |

*Note*: All entering freshmen must satisfy a summer residency requirement. Freshmen must take a minimum of 9 credits during the summer semesters while at FIU.

This may be accomplished, for example, by taking six credits in one summer and three credits during another summer.

## Course Descriptions

**Definition of Prefixes**

EGM - Engineering Mechanics; EGN - Engineering; General; EMA - Engineering; Materials; EML - Engineering: Mechanical

**CWR 3201 Fluid Mechanics (3).** A study of the properties of fluids and their behavior at rest and in motion. Buoyancy and stability. Momentum and energy considerations in fluid flow. Prerequisite: EGN 3321. Corequisite: EGN 3353L.

**EGM 3311 Analysis of Engineering Systems (3).** Analysis of engineering problems, from modeling principles to their solution via linear and nonlinear differential equations. Lumped parameter analysis and numerical methods available for solutions. Prerequisites: MAC 3312 and EGN 3321.

**EGM 3503 Applied Mechanics (3).** Statics and dynamics of solids and fluids. Science of engineering materials. Open to non-mechanical engineering students only. Prerequisite: Permission of instructor.

**EGM 3520 Engineering Mechanics of Materials (3).** Analysis of axial, torsional, bending and combined stresses and strains. Plotting of shear, moment and deflection diagram with calculus applications and interpretations. Prerequisite: EGN 3311.

**EGM 4580 Principles of Bioengineering (3).** Medical Instrumentation and design, regulations for medical devices, application of computers in medicine, biomaterials, biocommunications, artifi-

cial implants; clinical engineering. Prerequisite: Permission of instructor.

**EGM 4580L Biomedical Engineering Lab (1).** Introduction to the principles of biological signal measurements, biological data acquisition and image processing. Prerequisite: Permission of instructor.

**EGM 4581 Biomechanics of Cardiovascular Systems (3).** Functional cardiovascular physiology and anatomy; analysis and computation of cardiovascular flow; constitutive properties of tissue; coronary and systemic circulation; flow and stress considerations in cardiovascular assist devices. Prerequisites: EGN 3520 and EGN 3353.

**EGM 4583 Orthopaedic Biomechanics (3).** Introduction to the fundamentals of human musculoskeletal physiology and anatomy and computation of mechanical forces as it applies to orthopaedic biomechanics. Prerequisites: EGN 3321 and EGM 3520.

**EGM 4610 Introduction to Continuum Mechanics (3).** Introduction to modern continuum mechanics, mathematical preliminaries, stress and equilibrium, deformations and compatibility, constitutive equations, balance laws, problems solution strategies. Prerequisite: EGM 3520.

**EGN 3311 Statics (3).** Forces on particles, and two and three dimensional rigid bodies, equilibrium of forces, moments, couples, centroids, section properties, and load analysis of structures; vector approach is utilized. Prerequisites: MAC 3312 and PHY 3048.

**EGN 3321 Dynamics (3).** Study of the motion of particles and rigid bodies, conservation of energy and momentum. A vector approach is utilized. Prerequisites: EGN 3311 and PHY 3048.

**EGN 3343 Thermodynamics I (3).** Fundamental concepts of basic thermodynamics including first and second law topics, equations of state and general thermodynamic relationships. Prerequisites: MAC 3312, PHY 3048 and CHM 1045.

**EGN 3365 Materials in Engineering (3).** A study of materials used in engineering. Includes atomic structure phase diagrams and reactions within solid materials. Prerequisite: CHM 1045.

**EGM 5354 Finite Element Method Application in Mechanical Engineering (3).** Utilize the finite element method to solve problems in heat transfer, fluid dynamics, diffusion, acoustics, vibration, and electromagnetism, as well as the coupled interaction of these phenomena. Prerequisites: CGS 3420, EGM 3520, and EML 4140.

**EGM 5935 Review of Topics in Mechanical Engineering (4).** To prepare qualified candidates to take Mechanical Engineering PE written examination. Reviewed courses include Thermodynamics, Fluid Mechanics, Mechanics of Materials, Mechanical Design and Heat Transfer.

**EGN 5990 Fundamentals of Engineering (FE) Review (4).** Prepares upper level engineering students to take the fundamentals of Engineering (FE) State Board Examinations. Reviews Chemistry, Computers, Statics, Synamics, Electrical Circuits, Fluid Mechanics, Mechanic of Materials, Material Science and Thermodynamics.

**EGS 1110 Engineering Drawing (3).** Laboratory experiences in the principles and practice of idea development and expression through free hand sketching and conventional instrument drafting. A beginning course for students with no prior drafting experience.

**EMA 3066 Polymer Science and Engineering (3).** Introduction to preparation, molecular structure - property relationships, processing and applications of macromolecular materials. Prerequisite: EGN 3365.

**EMA 4121 Physical Metallurgy (3).** Correlation of properties, structural and mechanical history, thermal history and service behavior of various metals and their alloys. Prerequisite: EGN 3365.

**EMA 4121L Materials Laboratory (1).** Laboratory techniques in materials, including metallography, mechanical testing, heat treatment and non-destructive testing techniques. Prerequisite: EGN 3365.

**EMA 4223 Mechanical Metallurgy (3).** Fundamentals of plastic deformation of crystalline solids: elementary theory of statics and dynamics of dislocations; applications to deformation of single crystals and polycrystals; fracture of metals. Prerequisite: EGN 3365.

**EMA 4702 Topics in Mechanics and Materials Science (2).** A mid-level course addressing the selection of engineering materials based on static and dynamic loadings, environmental analysis and the experimental analysis of mechanical systems. Emphasis on metals and composite materials. Prerequisites: EGN 3365 and EGM 3520.

**EMA 5295 Principles of Composite Materials (3).** The mechanical behavior of composite materials used in the automotive, aircraft and sporting goods industries. Material and laminar properties; design of composites; failure analysis; and environmental effects. Prerequisite: EGN 5615 or permission of instructor.

**EMA 5935 Advanced Topics in Materials Engineering (3).** Topics include Thermodynamics of solids, principles of physical metallurgy, including phase transformation and diffusion and analytical methods in materials engineering.

**EML 3101 Thermodynamics II (3).** Continuation of Thermodynamics I covering reactive and nonreactive mixtures and various thermodynamic cycles. Prerequisite: EGN 3343.

**EML 3222 Systems Dynamics (3).** Introduction to modeling of mechanical systems; derivation of system equations and system's response of fluid, thermal, and vibrational system. Solution methods available will be discussed. Prerequisites: MAP 3302 or EGM 3311, EGN 3321, EGM 3520, CGS 3420 or permission of instructor.

**EML 3262 Kinematics and Mechanisms Design (2).** Fundamentals of kinematics and mechanism design; study of the mechanisms used in machinery and analysis of the motion. Two and three dimensional analytical and numerical methods of computer application and design is emphasized. Prerequisites: EGN 3321 and CGS 3420.

**EML 3301C Instrumentation (3).** A practical study of common instrumentation techniques. Use of instrumentation and measurement methods to solve problems is emphasized. Prerequisite: EEL 3003.

**EML 3301L Instrumentation and Measurement Laboratory (2).** A practical study of common instrumentation elements and measurement systems used in mechanical and electro-mechanical applications. Prerequisites: EEL 3003 and EEL 3111L.

**EML 3450 Energy Systems (3).** Review of theory and engineering aspects of conventional energy conversion systems, fuels and combustion, fossil fuels, and nuclear power plants. Aspects of direct energy conversion. Prerequisite: EGN 3343.

**EML 3500 Mechanical Design I (3).** Design of basic machine members including shafts, springs, belts, clutches,

chains, etc., Prerequisites: EGN 3321, EGM 3520, and EGN 3365.

**EML 4140 Heat Transfer (3).** Study of fundamentals of basic heat transfer including conduction, convection, and radiation. Computer applications and design problems emphasized. Prerequisites: CGS 3420, EGN 3343, EGN 3353, and MAP 3302.

**EML 4220 Mechanical Vibrations (3).** Theory and application of mechanical vibrations. Includes damped and undamped vibrations with one or more degrees of freedom computer methods emphasized. Prerequisites: EGN 3321, EGM 3520, and CGS 3420.

**EML 4260 Dynamics of Machinery (3).** Acceleration and force analysis of reciprocating and rotating mechanisms and machines. Dynamic balancing of idealized systems. Torsional and lateral critical speeds of a rotor and self-excited instability. Prerequisite: EGN 3321.

**EML 4312 Automatic Control Theory (3).** Feedback control systems; stability analysis; graphical methods. Applications with emphasis on hydraulic, pneumatic and electro-mechanical devices. Prerequisites: EGN 3321, MAP 3302 or EGM 3311.

**EML 4411 Mechanical Power Theory (3).** Study of various techniques used in generating power. Emphasis of large central station power plants. Prerequisites: EGN 3343 and EML 3101.

**EML 4419 Propulsion Systems (3).** Basics of air breathing and rocket engines used in flight systems, gas turbine and ramjet fundamentals. Introduction to compressor and turbine design. Propulsion performance. Unconventional means of propulsion in space. Prerequisites: EGN 3343 and EML 4711.

**EML 4421 Internal Combustion Engines (3).** Engine types, characteristics and operation. Performance factors, fuel combustion, power cycles. Knock and engine variables. Exhaust emissions. Fuel Metering. Compressors and turbines. Prerequisite: EML 3101.

**EML 4421L Mechanical Lab II (1).** Experiments in internal combustion engines, gas turbines, steam turbines, boilers. Prerequisites: EGN 3343 and EML 4140.

**EML 4501 Mechanical Design II (3).** Continuation of design analysis of elementary machine elements, including lubrication bearings, and gearings. Introduction to advanced analysis techniques. Prerequisite: EML 3500.

**EML 4535 Mechanical Computer Aided Design (3).** Introduction to computer in the design process. Course emphasizes the use of interactive computing and computer graphics in developing CAD applications. Programming project is required. Prerequisites: CGS 3420 and EGN 3321.

**EML 4561 Introduction to Electronic Packaging (3).** Introduction to mechanical packaging of electronic systems. Integrates concepts in mechanical engineering to the packaging of electronic systems, such as hybrid microelectronics. Prerequisites: EEL 3003 and EEL 3111L.

**EML 4585 Design of Biomedical Systems and Devices (3).** Mechanical design and material choices of various biomedical systems and devices such as cardiovascular assist devices, total artificial heart, pulmonary assist devices, total hip prosthesis and other orthopaedic devices. Prerequisites: EGN 3365, EGN 3520, EGN 3353 or permission of instructor.

**EML 4601 Refrigeration and Air Conditioning Principles (3).** Theory, and application of principles of heating, ventilating and air conditioning equipment and systems. Design problems. Physiological and psychological factors relating to environmental control. Prerequisite: EGN 3343.

**EML 4601L Refrigeration and Air Conditioning Lab (2).** Experiments in Air Conditioning and Refrigeration applications.

**EML 4603 Air Conditioning Design I (3).** Psychometry comfort; mechanical refrigeration; heat pumps load calculations; cooling coil performance; heating and humidification; and distribution duct design fans. Prerequisite: EML 4601 or permission of instructor.

**EML 4608C Mechanical Systems in Environmental Control (3).** Analysis of refrigeration, heating and air distribution systems. Synthesis of environmental control systems. Prerequisite: EGN 3343 and EML 4601.

**EML 4702 Fluid Dynamics (2).** A mid-level course on ideal fluid flow, compressible flow and viscous flow. Analysis and numerical techniques of continuity and Navier-Stokes equation for incompressible and compressible flow. Prerequisite: EGN 3353.

**EML 4706 Design of Thermal and Fluid Systems (3).** Design of thermal and fluid systems and components. Piping networks, duct works. Selection of pumps and fittings. Basic design of heat exchangers, turbomachinery, pumps, and fans. Prerequisites: EGN 3353, EML 4140, and EML 3101.

**EML 4711 Gas Dynamics (3).** Basic equations of motion for the flow of a compressible fluid, isentropic flow, normal and oblique shock waves, linearized flows method of characteristics and supersonic thin-air foil theory. Prerequisites: EGN 3353 and EGN 3343.

**EML 4905 Senior Design Project (1-3).** Project course introducing methods of research; a survey, analysis, or apparatus project in mechanical engineering or a research on a current problem in engineering. Prerequisites: Senior standing and approval by advisor.

**EML 4906L Mechanical Lab I (1).** Experiments with various types of mechanical equipment including engines, fans, boilers, pumps, and motions and mechanics. Corequisites: EGN 3343 and EGN 3353.

**EML 4930 Special Topics/Projects (1-3).** Individual conferences, assigned readings, and reports on independent investigations selected by the students and professor with approval of advisor.

**EML 4936 Mechanical Engineering Seminar (1).** Review sessions will include topics covering recent advances in various sub-specialties of Mechanical Engineering topics related to professional practices. Prerequisite: Senior standing.

**EML 4949 Co-op Work Experience (3).** Supervised full-time work experience in engineering field. Limited to students admitted to the co-op program with consent of advisor. Evaluation and reports required.

**EML 5103 Intermediate Thermodynamics (3).** Thermodynamic approach to processes and engines; alternative formulations and legendre transformations; maxwell relations, first and second order phase transitions. Prerequisites: EML 4101 and EGM 3311.

**EML 5104 Classical Thermodynamics (3).** Mathematical analysis of the laws of classical reversible and irreversible thermodynamics. Applications to mechanical, electromagnetic, and chemical systems, under ideal and real current interest. Prerequisite: EML 3101.

**EML 5125 Classical Dynamics (3).** Kinematics of rigid body motion, Eulerian angles, lagrangian equations of motion, inertia tensor, momental ellipsoid. Rigid-body equations of motion, Euler's equations, force-free motion, polhade

and herpolhade, theory of tops and gyroscopes. Variational principles. Hamiltonian equations of motion. Poinsote representation. Prerequisites: MAP 3302 and EGN 3321.

**EML 5152 Intermediate Heat Transfer (3).** Multi-dimensional heat conduction under steady and transient conditions. Heat, mass and momentum transfer. Radiation heat transfer. Gas radiation. Free and forced convection. Prerequisites: EML 4140 and EML 5709.

**EML 5277 Computer Aided Design and Analysis of Mechanical Systems (3).** Computer aided geometrical modeling of spatial mechanical systems. Design criteria and analytical approaches for planer kinematic systems will be emphasized. Prerequisites: EML 4260 and EML 4535.

**EML 5562 Advanced Electronic Packaging (3).** Advanced topics in electronic packaging. Evaluation of first through fourth level assembly. Applications of computer layout design, thermal management and mechanical stability analysis. Prerequisite: EML 4561 or permission of instructor.

**EML 5606 Advanced Refrigeration and Air Conditioning Systems (3).** The various methods used in the thermal design and analysis of both refrigeration and heat pump systems are investigated. Various methods of producing heating and cooling are examined including vapor compression, absorption, air cycle, steam jet, thermoelectric, solar heating and cooling systems.

**EML 5615 Computer Aided Design in Air Conditioning (3).** Software will be used to demonstrate heating, ventilating and air conditioning design concepts and sizing equipment & determing performance parameters. Project design is required. Prerequisite: EML 4601 and EML 4603.

**EML 5708 Advanced Design of Thermal and Fluid System (3).** Advanced designs of pumps, compressors, heat exchangers, HVAC systems and thermal and fluid control devices. Prerequisite: EML 4706.

**EML 5709 Intermediate Fluid Mechanics (3).** Basic concepts and scope of fluid dynamics; non-inertial reference frames. Two-dimensional potential theory. Applications to airfoils. The Navier-Stokes equations; selected exact and approximate equations. Prerequisite: EGN 3353.

# School of Design

**Gordon Hopkins,** *Dean*
**Adele Smith,** *Associate Dean*
**Leonardo Alvarez,** *Chairperson, Landscape Architecture and Architectural Studies*
**John Konarski, III,** *Chairperson, Retailing and Apparel Studies*
**José Mitrani,** *Chairperson, Construction Management*

The School of Design offers baccalaureate degree programs in Architectural Studies, Apparel Management, Construction Management, and Interior Design. Graduate degree programs are offered in Construction Management and Landscape Architecture.

### Community Involvement

The School maintains close ties with the apparel, architecture, construction, retailing, landscape architecture, and interior design industries. Industry advisory committees periodically review the curriculum to maintain its relevance to the needs of the industry.

### Admission Preparation

Prospective students who are considering majors within the School of Design must meet the University's general admission requirements. Many of the School's academic programs require extensive prerequisite preparation prior to enrollment in certain courses. Students should check the individual program requirements. These prerequisite courses, in some cases, are not offered at the University and must be taken at an approved community college or university.

# Retailing and Apparel Studies

**John Konarski, III,** *Assistant Professor and Chairperson*
**Marta Canaves,** *Lecturer*
**Elliot Gant,** *Distinguished Lecturer*
**Judy Grossbard,** *Assistant Professor*
**Greta Howard,** *Lecturer*
**Robert Merkel,** *Associate Professor*
**Adele Smith,** *Associate Professor and Associate Dean*

The Department of Retailing and Apparel Studies offers a baccalaureate degree in Apparel Management with specializations in Fashion Design and Retailing. All majors are required to obtain professional experience through the completion of intensive career internships. Undergraduate and graduate level courses are also offered in the Department to serve other University programs.

The department offers a minor in Retailing Management. In addition, Professional Certificate programs are offered in Advanced Fashion Design and Retailing Management. Refer to Certificate section for detailed information.

## Bachelor of Science in Apparel Management

### Lower Division Preparation

To qualify for admission to the program, FIU undergraduates must have met all the lower division requirements including CLAST, completed 60 semester hours, and must be otherwise acceptable into the program.

### Required Courses

Thirty six semester credits of general education courses including: English Composition (12), Social Science (6), Humanities (6), Natural Science (6), Mathematics (6) including college algebra or higher.

### Recommended Courses

Fashion, accounting, marketing, economics, art, psychology, and management.

### Fashion Design

The goal of the Fashion Design specialty is to provide intensive design education through lecture and lab classes. Students will complete the core curriculum in addition to courses in the design specialization. The degree requirements represent a four year program. Transfer students will be evaluated and and advised accordingly.

The Fashion Design curriculum listed in this catalog is currently under revision. An updated version of the curriculum should be obtained from the Retailing and Apparel Studies department.

**Basic Fashion Design Courses:** (37)

| | | |
|---|---|---|
| CTE 3731L | Fashion Illustration[1] | 3 |
| CTE 3703 | Design Inspiration | 3 |
| CTE 3743L | Commercial Pattern Drafting I[1] | 3 |
| CTE 3744L | Commercial Pattern Drafting II[1] | 3 |
| CTE 3751L | Draping I[1] | 3 |
| CTE 3753L | Draping II[1] | 3 |
| CTE 3721L | Fashion Design Fundamentals[1] | 3 |
| CTE 3722L | Creative Design II[1] | 3 |
| CTE 3363L | Commercial Garment Production I[1] | 3 |
| CTE 3401L | Survey of Textiles | 4 |
| ART 1202 | 2-D Design | 3 |
| ART 1203 | 3-D Design | 3 |

[1]Contact the Department for course information.

**Program Requirements:** (68)

| | | |
|---|---|---|
| CGS 2060 | Introduction to Microcomputers | 3 |
| COA 2410 | Consumer Decisions | 3 |
| CTE 3010 | Orientation | 1 |
| CTE 3364L | Commercial Garment Production II | 3 |
| CTE 3733L | Advanced Fashion Illustration | 3 |
| CTE 3748L | Pattern Grading Analysis | 2 |
| CTE 3755L | Advanced Draping and Pattern Making | 4 |
| CTE 3761 | Merchandise Production and Distribution | 3 |
| CTE 3762L | Cutting Analysis and Material Utilization | 3 |
| CTE 3763 | Machine Evaluation and Selection | 3 |
| CTE 3771L | Menswear Design | 3 |
| CTE 3772L | Childrenswear Design | 3 |
| CTE 3821 | Quantitative Decisions in Retailing | 3 |
| CTE 4442 | Textile and Apparel Testing | 1 |
| CTE 4442L | Textile and Apparel Testing Lab | 2 |
| CTE 4729 | Design Seminar | 3 |
| CTE 4767 | Apparel Quality Assurance | 3 |
| CTE 4768L | Industrial Apparel Assembly and Costing | 3 |
| CTE 4773L | Active Sportswear Design | 3 |
| CTE 4778 | Computer Aided Apparel Design | 3 |
| CTE 4880 | Internship | 6 |
| CTE 4890 | Apparel Career Seminar | 1 |
| FAD 3232 | Relationships | 3 |
| HME 3210 | Personal and Career Management | 3 |

**Design Electives:** (Select one course)

| | | |
|---|---|---|
| CTE 4774L | Womenswear Design | |
| CTE 4775L | Sportswear Design | |
| CTE 4930 | Special Topics | |

### Retailing Management

The Retailing Management specialization is designed for students seeking management careers in retailing, marketing, communications, sales, and manufacturing. A minimum grade of 'C' is required in all courses.

**Major Requirements:** (45)

| | | |
|---|---|---|
| CGS 2060 | Introduction to Microcomputers | 3 |
| | or | |
| ESI 3161 | Industrial Application of Microcomputers | |
| COA 2410 | Consumer Decisions | 3 |
| CTE 1815 | Retail Operations | 3 |
| CTE 3010 | Orientation | 1 |
| CTE 3401L | Survey of Textiles | 4 |
| CTE 3761 | Merchandise Production and Distribution | 3 |
| CTE 3821 | Quantitative Decisions in Retailing | 3 |
| CTE 3833 | Retail Sales and Merchandising Strategies | 3 |
| CTE 3852L | Visual Merchandising | 3 |
| CTE 4831 | Retail Inventory Management | 3 |
| CTE 4842 | Product Knowledge | 3 |
| CTE 4863 | Retail Organizational Management and Leadership | 3 |
| CTE 4880 | Internship | 6 |
| CTE 4890 | Retail Career Seminar | 1 |
| HME 2210 | Personal and Career Management | 3 |

**Specialization Tracks:** (21 - 24)

In addition to the program requirements, students must select one of the following specialization tracks:

**Marketing Track**

| | | |
|---|---|---|
| MAR 3023 | Marketing Management | 3 |
| MAR 4153 | Retailing Management | 3 |
| MAR 4154 | Cases in Retailing Management | 3 |
| MAR 4303 | Advertising Management | 3 |
| MAR 4503 | Consumer Behavior | 3 |
| MAR Elective | | 3 |
| Upper Division Electives[1] | | 6 |

**Elective Track**

| | | |
|---|---|---|
| CTE 4851 | Fashion Promotion | 3 |
| MAR 3023 | Marketing Management | 3 |
| MAR 4154 | Cases in Retailing Management | 3 |
| Additional upper-division elective[1] | | 15 |

[1]With advisor and chairperson approval.

### Minor in Retailing Management

Intended for students seeking expertise specifically related to retailing. A minimum grade of 'C' is required in all courses.

**Required Courses:** (16)

| | | |
|---|---|---|
| CTE 3401L | Survey of Textiles | 4 |
| CTE 3761 | Merchandise Production and Distribution | 3 |
| CTE 3821 | Quantitative Decisions in Retailing | 3 |
| CTE 4827 | Fashion Buying and Merchandising Strategies | 3 |
| One CTE advised elective | | 3 |

## Course Descriptions

### Definition of Prefixes

COA-Home Economics; CTE-Clothing and Textiles; FAD-Family Development; HME-Home Management and Equipment

**COA 2410 Consumer Decisions (3).** Information needed to make effective consumer choices . Services of help and protection, pertinent legislation, economical issues. Experiences in product and services comparison. Open to non-majors.

**CTE 1815 Apparel Retail Operations (3).** Introduction to the non-merchandising functions of a retail operation such as advertising control, personnel, customer services, and distribution. Open to non-majors.

**CTE 3010 Orientation (1).** Introduction to the specialties in the Apparel Studies Department and orientation to the University. Includes personal assessment of basic skills needed for academic and vocational success.

**CTE 3050 The Fashion World (1).** Study of the evolution of fashion from concept to consumer. Various fashion careers will be explored. Field trips and guest speakers will be utilized. (For non-majors)

**CTE 3200 Clothing and Consumer (2).** Study of various topics pertaining to the consumer and his or her apparel choices including clothing as a mean of communication, optical illusions, art elements, care of clothing, and success dressing.

**CTE 3204 Professional Wardrobe Coordination (1).** Analyzes effect of professional image on career success. Prepares students to assist others in planning wardrobes based on personal qualities and career settings. Open to non-majors.

**CTE 3310L Principles of Clothing Construction (3).** Includes experience and understanding of basic principles of clothing construction and leads to more advanced techniques and learning. Course individualized according to student's needs and expertise.

**CTE 3312L Apparel Construction and Analysis (2).** Evaluation of apparel construction methods. Includes construction of a simple garment.

**CTE 3363L Commercial Garment Production I (3).** Fundamentals of apparel construction using industrial machines and techniques. Samples will be sewn.

**CTE 3364L Commercial Garment Production II (3).** Advanced techniques in apparel construction using industrial machines and techniques. Introduction to cost factors related to production. Prerequisite: CTE 3363L or equivalent.

**CTE 3401L Survey of Textiles (4).** Study of the physical properties of textile fibers, yarns, fabrics, color applications, and finishes, as they relate to care, performance, and consumer satisfaction. Identification and analysis of fibers and fabrics will be emphasized.

**CTE 3461 Apparel Fabrics (2).** Contributions of fiber type, yarn and fabric structure, dyeing, and finishing to manufacturing characteristics and marketability of apparel fabrics.

**CTE 3703 Design Inspiration (3).** Study of resources utilized for inspiration when designing apparel. Emphasis will be on historic costume, the arts, and other areas of design.

**CTE 3715 Fabrication of Designs (3).** Selection and coordination of fabrics for apparel designs. Includes analysis of fabrication choices as they relate to production problems, design features, fashion trends, cost factors, and marketability. Prerequisite: CTE 3401L.

**CTE 3721L Fashion Design Fundamentals (3).** Application of basic design skills and creativity to the sketching and execution of design projects in the categories of sportswear, holiday fashions, and dresses. Prerequisites: CTE 3744L, CTE 3753L, and CTE 3363L.

**CTE 3722L Creative Design II (3).** Emphasis on designing and fabricating fashion lines. Advanced draping and pattern techniques will be used to develop patterns. Sample garments will be constructed. Prerequisite: CTE 3721L.

**CTE 3731L Fashion Illustration (3).** Application of design concepts to fashion illustration. Development of the fashion figure as basis for construction sketches and finished illustrations. Prerequisite: ART 1202. Corequisite: ART 1203.

**CTE 3733L Advanced Fashion Illustration (3).** Advanced illustration work in rendering fabric drapery characteristics, construction details, color, and texture. Prerequisite: CTE 3731L.

**CTE 3742L Commercial Pattern Analysis (2).** Overview of theory, geometric principles, and methods of pattern making for apparel and allied products. Development of a set of patterns. Corequisite: CTE 3748L.

**CTE 3743L Commercial Pattern Drafting I (3).** Development of master patterns from measurements. Emphasis on precision pattern-making according to industry standards.

**CTE 3744L Commercial Pattern Drafting II (3).** Use of master patterns in developing design ideas according to industry standards. Prerequisite: CTE 3743L.

**CTE 3748L Pattern Grading Analysis (2).** Overview of theory, principles, and methods used in commercial pattern grading in accordance with accepted size ranges and specifications. Corequisite: CTE 3742L.

**CTE 3751L Draping I (3).** Basic fundamentals of pattern making through draping basic silhouettes.

**CTE 3753L Draping II (3).** Additional practice in use of draping techniques for fashion design. Industry standards will be used in the development of specific fashion styles. Prerequisite: CTE 3751L.

**CTE 3755L Advanced Draping and Pattern-making (4).** Development of additional skills in designing garment features using appropriate industrial draping and pattern techniques, including sloper manipulation. Analysis of fit emphasized. Prerequisites: CTE 3744L and CTE 3753L.

**CTE 3761 Merchandise Production and Distribution (3).** Processes and methods in all phases of merchandise production and distribution. Students will be required to participate in an extensive group-based project. Open to nonmajors.

**CTE 3762 Cutting Analysis and Material Utilization (3).** Overview of cutting operations including fabric inspection, scaling, marking, spreading, cutting, and costing. Effective material utilization emphasized.

**CTE 3763 Machine Evaluation and Selection (3).** Study of thread, needles, stitch, and seam formation as it relates to apparel products. Survey of industrial sewing and pressing equipment and attachments. Cost considerations and payback periods examined.

**CTE 3766 Apparel Work Measurement (3).** In-depth study of procedures used to establish piece-work rates for sewing operations by using time study and M-T-M methods. Includes incentive systems, follow-up studies, and how to set an apparel plant on a piece work system.

**CTE 3771L Menswear Design (3).** Application of commercial techniques to the creative design of casual apparel for men. Prerequisite: CTE 3755L.

**CTE 3772L Childrenswear Design (3).** Application of commercial techniques to the creative designing of apparel for children. Prerequisite: CTE 3755L.

**CTE 3821 Quantitative Decisions in Retailing (3).** Application of financial management principles with emphasis on relationships among sales volume, stock turnover, expenses, and profit factors.

**CTE 3833 Retail Sales and Merchandising Strategies (3).** Theory and practice of managing a retail sales force. Includes issues related to merchandise assortment planning and effective store distribution. Prerequisite: CTE 3821.

**CTE 3852L Visual Merchandising (3).** Study and application of the principles and techniques of visual merchandising.

**CTE 4340L Advanced Clothing Construction (3).** Additional experience in handling special fabrics, pattern and garment fitting, and application of principles and techniques of commercial clothing construction. Prerequisite: CTE 3310L or equivalent.

**CTE 4347L/5348L Pattern Alterations (3).** Stresses importance of pattern selection for individual figure types and pattern alteration for special fitting problems. Students will construct a garment, make sample pattern alterations for special fitting problems, and alter a ready-made garment. Graduate students will have additional requirements. Prerequisite: CTE 3310L or equivalent.

**CTE 4352L/5354L Tailoring (3).** Application of custom tailoring techniques to construction of suit or coat, with emphasis on fabric selection and pattern alteration. Graduate students will have additional requirements. Prerequisite: CTE 4340L or equivalent.

**CTE 4442 Textile and Apparel Testing (1).** Fundamentals of the commercial testing methods used to evaluate fabric and garment performance. Includes statistical analysis of test results. Prerequisite: CTE 3401L or equivalent. Corequisite: CTE 4442L.

**CTE 4442L Textile and Apparel Testing Laboratory (2).** Laboratory to accompany CTE 4442.

**CTE 4465 Textile and Apparel In International Trade (3).** Examines legislation, theories, concepts, and problems relating to the international trade of textile and apparel products. Defines the scope and challenge of the textile/apparel international market.

**CTE 4471L/5475L Creative Textiles (3).** Fundamental principles of designing and constructing textile fabrics. Includes macrame, batik, tie-dying, weaving, knitting, and crocheting. Graduate students have additional requirements.

**CTE 4602 Fashion and Culture (3).** Study of evolution of apparel and its relationship to psychological, sociological, technological, historical, and cultural factors.

**CTE 4729L Advanced Apparel Design Seminar (3).** Advanced skills in designing, rendering, pattern making, and construction of apparel. Students will be able to express their own creative styles for presentation.

**CTE 4767 Apparel Quality Assurance (3).** Techniques and procedures used to inspect and evaluate the quality level of textile fabrics, in-process apparel products, finished apparel products, and goods received by the retailer.

**CTE 4768L Industrial Apparel Assembly and Costing (3).** Analysis of the theory and methods of assembly of apparel and allied products. Costing of apparel products is examined as it relates to the wholesale pricing of the product. Prerequisites: CTE 3763 and CTE 3766.

**CTE 4769 Apparel Production Planning and Scheduling (4).** Integrates all phases of apparel production. Correlations and interactions among sales, sales forecasting, fabric purchasing, trim purchasing, production planning, scheduling, and control. Prerequisite: CTE 4768.

**CTE 4773L Active Sportswear Design (3).** Application of commercial techniques to the creative design of active sportswear for men and women. Prerequisite: CTE 3755L.

**CTE 4774L Womenswear Design (3).** Application of commercial techniques to the creative design of apparel for women, excluding sportswear. Prerequisite: CTE 3755L.

**CTE 4775L Sportswear Design (3).** Application of commercial techniques to the creative design of sportswear for misses and juniors. Prerequisite: CTE 3755L.

**CTE 4778L Computer Aided Apparel Design (3).** Study concepts, issues and methods in computer-aided apparel design. Seniors only. Prerequisites: CTE 3755L and CGS 2060

**CTE 4814 Apparel Entrepreneurship (3).** Planning and management of small retail apparel stores. Emphasis on special problems inherent in merchandising of fashion apparel. Prerequisites: CTE 3821 and CTE 4827.

**CTE 4822 Quantitative Decisions II (3).** Further exploration of financial management in apparel sales organizations based on dollar and unit figures. Emphasis on profit influences. Prerequisite: CTE 3821 or equivalent.

**CTE 4827 Fashion Buying and Merchandising Strategies (3).** Study of major considerations involved in buying and marketing of fashion merchandise. Includes development of merchandise assortment plans, with emphasis on effective store distribution. Prerequisite: CTE 3821.

**CTE 4831 Retail Inventory Management (3).** Management of merchandise to increase sales and profit. Computer technology applied to stock control, distribution and warehouse operations. Prerequisites: CTE 3821 and CTE 3833.

**CTE 4842 Product Knowledge (3).** Extension of merchandising principles to include non-textile materials such as leather, furs, accessories, and home furnishings. Investigation of materials, construction, styles, and merchandising requirements. Prerequisite: CTE 3761.

**CTE 4851L Fashion Promotion (3).** Study of processes and actions that move fashion merchandise including evaluation of their effectiveness to the retailer. Includes guest presentations in advertising, display, public relations. Students plan, organize and produce a Fashion Show.

**CTE 4863 Retail Organizational Management and Leadership (3).** Theory and practice of organizational literacy, communication, global awareness, strategic planning, in relation to the special problems of retailers. Open to non-majors.

**CTE 4880 Internship (3-6).** Supervised 'on-the-job' training and periodic seminars. Consent of instructor required.

**CTE 4890 Retail Career Seminar (1).** Exploration of career opportunities and proficiencies required for employment.

**CTE 4905/5905 Independent Study (1-3).** Project, field experience, readings, or research.

**CTE 4930 Special Topics (1-3).** For groups of students who wish an intensive study of topics not otherwise offered in the University. Consent of faculty supervisor and department chairperson is required.

**CTE 5345 New Trends in Clothing Construction (3).** Study of the latest techniques for sewing today's fabrics, including some factory methods. Prerequisite: CTE 4340L or equivalent.

**CTE 5355L Tailoring Menswear (3).** Application of tailoring techniques commercially used in the production of menswear, through the construction of a knit jacket and trousers. Prerequisite: CTE 4340L or equivalent.

**CTE 5426L Recent Developments in Textiles (3).** Exploration into recent developments in textile fibers and fabrics. Laboratory exercises in textile-testing procedures.

**CTE 5746L Pattern Design (3).** Principles of pattern fitting will be explored through the construction of a basic sloper. Samples of various pattern design techniques will be constructed. Students will design and construct at least one garment. Prerequisite: CTE 4347L or CTE 4340L.

**CTE 5885 Apparel Field Experience (3-6).** Supervised field placement in local apparel settings for professionals in apparel careers. Permission of chairperson required.

**CTE 5930 Textiles and Clothing Seminar (1-3).** By permission of instructor only.

**FAD 3232 Relationships (3).** Emphasizes attitudes, feelings, communication, life styles in varying interpersonal relationships. Includes human sexuality component. Open to non-majors.

**HME 2210 Personal and Career Management (3).** Application of management principles for career and personal objectives. Emphasis on planning and organizational skills. Open to non-majors.

## Construction Management

**José D. Mitrani, P.E.,** *Associate Professor and Chairperson*
**Irtishad Ahmad,** *Assistant Professor*
**Gabriel Aurioles,** *Associate Professor*
**Wilson Barnes,** *Assistant Professor and Coordinator, Broward Program*
**Bhaskar Chaudhari,** *Professor*
**Eugene D. Farmer,** *Assistant Professor*
**Ayman Morad,** *Assistant Professor*
**Julio Otazo,** *Assistant Professor*

### Bachelor of Science in Construction Management

The undergraduate program in Construction Management is nationally accredited by the American Council for

Construction Education. Its goal is to provide students with the knowledge and skills required for entry level supervisory or managerial positions in the construction industry. Graduates usually find employment as construction superintendents, project managers, project schedulers, cost estimators, quality controllers or in managing their own construction businesses.

Opportunities for employment or advancement exist in all areas of the construction industry including land development, home building, public building, industrialized building systems, commercial, industrial, marine and heavy construction, underwater and space age facilities, material and equipment sales and installations, and construction product research, development and sales.

## Honorary and Professional Associations

**Sigma Lambda Chi:** Sigma Lambda Chi is the national honorary society for students in Construction. The purpose of Sigma Lambda Chi is to recognize students in Construction Management for outstanding scholastic achievement. The organization provides a service to the students by inviting guest lecturers, sponsoring student tutoring and undertaking a variety of service projects.

**Student Chapter of the Associated General Contractors of America:** The AGC is a national student organization sponsored by the Associated General Contractors of America. Its purpose is to increase student awareness of the construction industry, promote fellowship and professionalism and to provide service to the Department, University and Community. Membership is open to all Construction related majors. Activities include sponsoring guest lecturers, attendance at local, regional and national AGC meetings and conferences, and undertaking a variety of service projects.

**Student Chapter of the National Association Of Women In Construction:** This national student organization is sponsored by the National Association of Women in Construction. Its purpose is to promote knowledge of the construction industry and fellowship within the student body. Activities include monthly meetings with guest lecturers, field trips and a variety of service projects. The FIU student chapter of NAWIC was the first such chapter established in the United States. Membership is open to all construction related majors.

## Program of Study

The four year program leading to a Bachelor of Science in Construction Management is for students who are interested in preparing for professional careers in construction management, techniques, operations, and related areas in the construction industry.

The Lower Division Core, i.e., Freshman and Sophomore levels, are designed to provide easy transfer for community college graduates. With proper planning, transfer students with an A.A. degree may complete the four year degree program in four remaining semesters at the University. Prospective community college transfer students should contact an advisor for program information and lower division transfer requirements prior to enrolling at FIU.

Students already working full time, many with trades or construction licenses, are generally able to plan their program around job commitments and responsibilities. Faculty advisors are available by appointment only to assist students in course selection and scheduling.

### Admission

The Department of Construction Management encourages applications for admission from qualified students of both sexes, from all cultural, racial, religious or ethnic groups. It should be understood that minimum requirements have been established and that admission to the Department is a selective process.

### Grade Point Average

Admission into the undergraduate program requires a minimum 2.0 grade point average. Students transferring from another university or community college should review this university's catalog for university policies, application procedures and contact a Construction Management advisor to review transcripts and determine allowable transfer credits.

### Transfer Credits

No grade below a 'C' shall be acceptable for transfer into the program. Lower Division courses (courses at the 1000 or 2000 level) designated as equivalent by the statewide course numbering system may be accepted by the Department as fulfilling the upper division requirements, however, credits from lower division courses shall not be used to offset upper division core credit requirements.

When equivalent lower division courses are used to fulfill upper division course requirements, a student will be required to complete an equal number of 3000 level (or above) credits from approved Departmental electives. Extra credits above the 60 semester credit hours required for admission into the Construction Management program will not reduce the number of credit hours to be completed in the Upper Division, including electives, to earn a degree and may not be accepted for equivalent credit in Upper Division.

### Core and General Education Requirements

Students entering the university with less than 48 semester credit hours will be required to meet the requirements of the University Core Curriculum, in addition to the Department Lower Division Core. Students entering the university with more than 48 semester credit hours will be required to meet the University General Education requirements, in addition to the Department Lower Division Core.

### Non-Degree-Seeking Status

Students wishing to enroll in courses during the application process may do so as non-degree-seeking students. Students must consult an advisor for approval and complete a special student enrollment waiver. Without this waiver and advisor approval, there is no guarantee that the courses taken will be accepted for graduation. No more than 15 semester credits of work taken as a special student can be applied toward graduation. Students may remain in non-degree-seeking status for no more than two semesters.

## General Regulations

### Registration

Each student must meet with his/her advisor each semester, prior to registering for the next semester. This meeting is intended to review and update the students' file.

### Normal Loads

Students taking a minimum of 12 semester credit hours per semester are considered full time students. Students taking under 12 hours are considered part time and should be aware that certain university privileges and benefits may not be applicable to part time students. Students are not recommended to take excessive loads. Special exceptions may be made, at the option of the Department, in the case of students with a grade point average of 3.0 or greater. Students that meet these criteria wishing to take over 18 semester credit hours must have the approval of both the Chairman of the Department and the Dean of the College of Engineering and Design, prior to registering for an overload.

### Students Rights and Responsibilities

It is the student's responsibility to obtain, become familiar with, and abide by all Departmental, College and University requirements and regulations. These include, but are not limited to:

1. The Florida International University Catalog.
2. Division of Student Affairs' Handbook on Rights and Responsibilities of Students.
3. Florida International University Student Grievance Procedure.
4. Department of Construction Management Curriculum and Program sheets.
5. All Department of Construction Management policies and regulations.

### Grades

The Department of Construction Management requires a minimum grade of 'C' or better in all lower division and upper division core courses including electives.

### Grade of Incomplete

A grade of 'I' (Incomplete) may be granted, at the option of the Instructor and the Department Chair, to a student who, due to serious, documented, and verifiable extenuating circumstances beyond his/her control (such as an illness requiring hospitalization) is unable to complete the work required to obtain a grade for a course. In no case shall a grade of 'I' be granted to a student because he/she is not passing a course and desires additional time to attempt to obtain a passing grade. A student granted a grade of 'I' must complete the work deemed by the Instructor necessary to complete the course no later than two semesters after the grade was assigned to the student, or the grade shall automatically revert to a grade of 'F' (failing grade).

### Independent Study

Students who wish to enroll in an independent study course must have the prior written approval of both the instructor and the Department Chairman the semester prior to registering. Independent Study courses can not be substituted for required lower or upper division departmental core courses or for elective courses.

### Credit By Examination

The Department does not generally offer credit by examination for required lower or upper division departmental core courses or electives. A student with outstanding, exceptional and documented skills in a particular subject as well as an outstanding academic record may request credit by examination, and it is the option of the Department Faculty and the Department Chairperson whether to grant the request.

### Credit For Non-College Learning

The Department does not award credit for non-college learning (life work experience).

### Student Work

The Department reserves the right to retain any and all student work for the purposes of record, exhibition or instruction.

### Normal Academic Progress

The student will have maintained normal academic progress when the student earns a minimum grade point average of 2.0 for all work attempted.

### Course Sequence and Prerequisites

Course prerequisites are clearly indicated on the Undergraduate Program sheets, available in the Department office. It is the students' responsibility, not the advisor's, to ascertain that required prerequisites have been taken and passed prior to registering for a course. Failure to comply with prerequisite requirements may result in the student being dropped from or failed in a class without prior warning from the instructor.

### Probation or Suspension

Students who do not make satisfactory academic progress may be excluded from further registration.

### Class Attendance

Class attendance may be required and may be used for grade determination at the option of the instructor.

### Graduation

In order to be eligible to graduate, the student must meet all University and Departmental requirements. The program of studies consists of 60 Lower Division semester credit hours and 70 Upper Division semester credit hours for a minimum total of 130 semester credit hours. The waiving of any required course shall not reduce the minimum of 130 semester credit hours required for graduation. A student must have successfully completed the University Core Curriculum (for those students that entered the program having completed less than 48 semester credit hours) or the University General Education Requirements (for those students that entered the program having completed more than 48 semester credit hours) with minimum acceptable grades as determined by Undergraduate Studies (see catalog for additional information). In addition, all lower division and upper division Construction Management core courses and electives must be completed with a grade of 'C' or better. In order to graduate a student must also have a minimum grade point average of 2.0, and have successfully completed all portions of the CLAST test (see CLAST section in the General Information).

Students should contact an advisor at least one semester prior to their projected graduation and request a review of his or her file. At the start of the final semester the student is required to complete and have his or her advisor approve an Application for Graduation, available from the Department. (See catalog for additional information on graduation procedures and scheduling.) If for any reason a student fails to graduate in the semester after applying for graduation, that student must reapply for graduation.

It is the student's responsibility, not his/her advisor's responsibility, to ascertain that all requirements for graduation, as stated in the University Catalog and in the Department Program sheets, have been met.

## Undergraduate Curriculum

### Lower Division Core

Courses numbered 'I' shall be taken before courses numbered 'II'. Some credits of the Lower Division Core can be used to satisfy University Core or General Education requirements. Prerequisite courses must be successfully completed prior to registration in a subsequent course. Students must consult the course description section for course prerequisites.

| | | |
|---|---|---|
| ARC 1461 | Methods and Materials of Construction I[1] | 3 |
| BCN 1252 | Building Construction Drawing I | 4 |
| ARC 3462 | Methods and Materials of Construction II[1] | 3 |
| BCN 3256C | Building Construction Drawing II | 4 |
| MAC 3233 | Calculus for Business | 3 |
| PHY 3053 | Physics with Physics Lab | 5 |
| COP 2172 | Programming in BASIC | 3 |
| ECO 2013 | Macro Principles | 3 |
| | or | |
| ECO 2023 | Micro Principles | |
| BCN 3281 | Construction Surveying | 3 |
| ACG 3024 | Accounting for Managers | 3 |

[1]Preferably taken as corequisites.

**Select seven credits from the following courses:**

| | | |
|---|---|---|
| MGF 1202 | Finite Mathematics | 3 |
| CHM 1032 | Survey of General Chemistry with Lab | 4 |
| GLY 1010 | Physical Geology with Lab | 4 |

| | | |
|---|---|---|
| STA 3132 | Business Statistics | 3 |
| EVR 3011 | Environmental Resources | 3 |

**Upper Division Program:** (70 minimum)

| | | |
|---|---|---|
| ARC 4270 | Professional Office Practice | 3 |
| BCN 3240 | Construction Methods and Equipment | 3 |
| BCN 3402 | Structural Design I | 4 |
| BCN 3611 | Construction Cost Estimating | 3 |
| BCN 3640 | Economic Planning for Construction | 3 |
| BCN 3703 | Management of Construction Projects | 3 |
| BCN 3720 | Construction Costs and Scheduling | 3 |
| BCN 3730 | Construction Safety | 3 |
| BCN 3740 | Legal Aspects and Construction Labor Law | 3 |
| BCN 3762 | Codes and Specifications | 3 |
| BCN 4260 | Quality Control in Construction | 3 |
| BCN 4461 | Structural Design II | 3 |
| BCN 4462 | Structural Design III | 3 |
| BCN 4561 | Environmental Control in Buildings | 4 |
| BCN 4612C | Advanced Estimating | 3 |
| BCN 4906 | Special Topics | 3 |
| BUL 4111 | Business Law I | 3 |
| EIN 3354 | Engineering Economy | 3 |
| LAA 5335 | Site Improvement | 3 |

**Business-Management Electives**

Selected with an advisor from the following courses to meet degree requirements and program objectives minimum semester hours required: 9

**Economics**

| | |
|---|---|
| ECO 3011 | Economics Man and Society-Macro |
| ECO 3021 | Economics Man and Society-Micro |
| ECO 3040 | Consumer Economics |
| ECO 4622 | Economic Development of the United States |
| ECO 4623 | American Business History |
| ECO 3431 | Applied Macroeconomics |
| ECO 4701 | World Economy |
| ECO 4703 | International Economics |

**Economics Systems and Development**

| | |
|---|---|
| ECP 3302 | Introduction to Environmental Economics |
| ECP 3613 | Introduction to Urban Economics |
| ECP 4203 | Introduction to Labor Economics |
| ECP 4203 | Theory of Labor Economics |
| ECP 4314 | Land and Resource Economics |
| ECP 4403 | Economic Policy for Industry |
| ECS 5025 | Economic Planning |
| ECS 3003 | Comparative Economic Systems |
| ECS 3402 | The Political Economy of South America |
| ECS 3440 | Economics of Central America |
| ECS 4013 | Introduction to Economic Development |

**Finance**

| | |
|---|---|
| FIN 3403 | Financial Management |
| FIN 4204 | Financial History of the United States |
| FIN 4303 | Financial Markets and Institutions |
| FIN 4345 | Credit Analysis and Loan Evaluation |
| FIN 4404 | Policies for Financial Management |
| FIN 4461 | Financial Statement Analysis |
| FIN 4435 | Capital Budgeting Techniques and Applications |

**Marketing**

| | |
|---|---|
| MAR 3023 | Marketing Management |
| MAR 4323 | Advertising Management |
| MAR 4333 | Promotional Strategy |
| MAR 4503 | Consumer Behavior |
| MAR 4723 | Marketing of Small Business Enterprises |

**Real Estate**

| | |
|---|---|
| REE 4204 | Real Estate Financial Analysis |
| REE 4303 | Real Estate Investment |
| REE 4043 | Real Estate Analysis |
| REE 4504 | Real Estate Management |

**Management**

| | |
|---|---|
| MAN 3025 | Organization and Management |
| MAN 3701 | Business and Society |
| MAN 4064 | Dilemmas of Responsibility in Business Management |
| MAN 4065 | Ethical Systems Management |
| MAN 4102 | Women in Management of Business Organizations |
| MAN 4151 | Behavioral Science in Management |
| MAN 4142 | Managerial Decision Styles |
| MAN 4120 | Intergroup Relations in Organization |
| MAN 4301 | Personnel Management |
| MAN 4320 | Personnel Recruitment and Selection |
| MAN 4330 | Wage and Society |
| MAN 4401 | Collective Bargaining |
| MAN 4711 | Social Responsibility and Social Accounting |
| MAN 4731 | Modern Business History |
| MAN 4741 | Business Environment and Policy Formation |
| MAN 4742 | Business and the Environment |
| MAN 4802 | Small Business Management |

**Politics and Law**

| | |
|---|---|
| BUL 3100 | The Legal Environment of Business |
| PUP 4203 | Environmental Politics and Law |
| PUP 4314 | American Ethnic Politics |
| INR 3403 | International Law |
| INR 4501 | Multinational Organizations |
| INR 4931 | Topics in International Relations |
| INR 4932 | Topics in the Politics of International Law |
| POS 3283 | Judicial Process |
| POS 3153 | Urban Politics |
| URP 4149 | Planning and Human Ecology |

**Public Relations**

| | |
|---|---|
| PUR 3000 | Principles of Public Relations |

## Course Descriptions

**Definition of Prefixes**

BCN-Construction.

**BCN 1252 Building Construction Drawing I (4).** The laboratory application of Methods and Materials of Construction I. Students prepare plans, elevations, sections, and details appropriate to light construction. Corequisite: ARC 1461

**BCN 3240 Construction Methods and Equipment (3).** Methods, procedures, and equipment used in residential, commercial, and heavy construction. Equipping the construction plant. Production value analysis. Work effectiveness studies. Prerequisite: Algebra.

**BCN 3256C Building Construction Drawing II (4).** The laboratory application of Methods and Materials of Construction II. Students prepare plans, elevations, sections, and details appropriate to general construction. Prerequisite: Some technical drawing background. Corequisite: ARC 3463.

**BCN 3281 Construction Surveying (3).** Principles and practices of survey-

ing as it applies to building construction. Prerequisite: Trigonometry.

**BCN 3402 Structural Design (4).** Applications of the principles of mechanics to engineering problems of equilibrium, strength, and stiffness. Topics include equilibrium of forces, stress, strain, torsion, beams, and columns. Prerequisite: MAC 2132 or equivalent.

**BCN 3611 Construction Cost Estimating (3).** Principles and practices of estimating providing application and drill in surveying quantities of labor and materials for general construction projects: excavation, concrete and formwork, carpentry, masonry, structural steel, lath and plaster, interior finishes. Prerequisites: ARC 1461 and BCN 1252 or equivalent.

**BCN 3640 Economic Planning for Construction (3).** Nature of construction costs, funding sources and arrangements, capital requirements, bonding, insurance, risk and contingency evaluation, general office operations, and bidding procedures. Prerequisites: BCN 3703 and EIN 3354, or equivalent.

**BCN 3703 Management of Construction Projects (3).** Organization and management theory elements of leadership and human supervision, organization, office operations, labor relations, safety, and work improvement, as they relate to project field operations. Prerequisite: BCN 3762 or equivalent.

**BCN 3720 Construction Costs and Scheduling (3).** The application of the Critical Path Method and Program Evaluation Review Technique to construction planning, scheduled vs. actual job expenditures. Cost forecasting. Development of unit prices from field data. Laboratory is included, which consists of computer applications. Prerequisite: BCN 3611 or equivalent.

**BCN 3730 Construction Safety (3).** Introduces occupational safety hazards associated with the construction industry. Emphasis placed on recognition, evaluation, and control of safety hazards particularly as they relate to the Occupational Safety and Health Act.

**BCN 3740 Legal Aspects of Construction and Labor Law (3).** Legal and business aspects of engineering contracts and specifications in the construction industry. Analysis, study of precedents, and application of contract clauses, including changes, changed conditions, termination, disputes, payments, risk and insurance, inspection, liquidated damages, and technical requirements.

**BCN 3753 Construction Accounting (3).** Accounting for construction operations; labor, materials, equipment, and overhead costs. Money management, depreciation, taxes, loans, profit/losses analysis. Prerequisite: ACG 3024 or equivalent.

**BCN 3761 Specifications Writing (4).** Study of methodology for acquisition of information and transmission of technical and legal requirements for construction projects. Preparation of outline specifications, building description, and purchasing specifications. Problems of format, reviewing, and updating. Prerequisites: ARC 3463, BCN 3257, BCN 3762, and BCN 3740 or consent of instructor.

**BCN 3762 Codes and Specifications (3).** A study of codes required by local, county, and state levels. The writing and reading of specifications: bidding procedures; the relationships between contractors, engineers-architects, owners, subcontractors, and material suppliers. Prerequisite: ARC 3463 or equivalent.

**BCN 4260 Quality Control in Construction (3).** Quality control as governed by the job inspector, contractor superintendent, architect-engineer, building official, and governmental agencies and requirements. Prerequisite: BCN 3762 or equivalent.

**BCN 4461 Structural Design 2 (3).** An introduction to the material properties, allowable stresses, applicable codes and standards for the design of timber and steel structures. Prerequisite: BCN 3402.

**BCN 4462 Structural Design 3 (3).** An introduction to the material properties, allowable stresses, applicable codes and standards for the design of reinforced concrete structures. Prerequisite: BCN 4461.

**BCN 4561 Environmental Control in Buildings (4).** A study of concepts and systems for providing optimum thermal, lighting, plumbing, and acoustical conditions, in both commercial and residential buildings. Prerequisites: Physics, ARC 3463, BCN 3257, or approval of instructor.

**BCN 4612 Advanced Estimating (3).** Quantity Take-offs and pricing, marketing policies and the application of microcomputers in construction estimating. Prerequisites: BCN 3611 and BCN 3720.

**BCN 4905 Directed Independent Studies (VAR).** Specialized intensive study in an area of special interest to the student. Prerequisite: Permission of instructor.

**BCN 4906 Special Topics (3).** For a group of students who wish an intensive study of a topic not otherwise offered in the University. Prerequisite: Permission of instructor.

## Landscape Architecture and Architectural Studies

**Leonardo Alvarez,** *Assistant Professor and Chairperson*
**J. A. Bueno,** *Assistant Professor*
**Jaime Canaves,** *Associate Professor*
**Marta Canaves,** *Visiting Lecturer*
**Gisela Lopez-Mata,** *Assistant Professor*
**Jose Lozano,** *Assistant Professor*
**Iraj Majzub,** *Professor*

The Department of Landscape Architecture and Architectural Studies is dedicated to advancing the professions of architecture, landscape architecture, and interior design. In keeping with the nature of these professions, the programs are taught in an interdisciplinary manner, taking full advantage of the resources and areas of expertise offered by each. The department offers two undergraduate programs, a Bachelor of Science in Architectural Technology and a Bachelor of Science in Interior Design, and a graduate Master of Landscape Architecture.

Articulation agreements have been made with Broward Community College and Miami Dade Community College to facilitate the transfer of graduates of appropriate lower division programs to programs in the department.

Only 'C' grades or higher are accepted for transfer of applicable prerequisite and core courses from other institutions. No grade below a 'C' will be accepted for graduation in prerequisite or core courses.

Student work submitted to the department in satisfaction of course or degree requirements, becomes the physical property of the department. However, students retain all rights to the intellectual property of such work. This work may include papers, drawings, models, and other materials. The department assumes no responsibility for safeguarding such materials. At its discretion, the department may retain, return, or discard such materials. The department will not normally discard the materials of current students without giving them a chance to reclaim them.

Students must petition the faculty of the department in writing for any deviation of the established policies. The fac-

ulty will decide on the cases on an individual basis.

## Bachelor of Science in Architectural Technology

This preprofessional program provides the student with a broad base of multidisciplinary knowledge related to the field of architecture. Graduates are prepared for entry into a professional Master of Architecture program. Emphasis is on the balance between the technical, managerial, theoretical and design aspects of architecture. Additionally, computers are treated not as a specialty but rather as a tool to be integrated into the various areas of study including design, construction documents, management, structures, scheduling, cost estimating and environmental controls. Many of the courses are taught in an interdisciplinary environment sharing expertise with construction management, interior design, and landscape architecture.

### Lower Division Preparation

To qualify for admission to the program, FIU undergraduates must have met all the lower division requirements including CLAST and must be otherwise acceptable into the program. In addition, FIU undergraduates with less than 48 semester hours, must meet all the University Lower Division Core Requirements.

**Lower Division Common Core**

| | | |
|---|---|---|
| ARC 1131 | Graphic Communication I | 3 |
| ARC 1301 | Design 1 | 4 |
| ARC 1461 | Methods & Materials of Construction I | 3 |
| ARC 2132 | Graphic Communication II | 3 |
| ARC 2212 | Introduction to Design Theories | 3 |
| ARC 2302 | Design 2 | 4 |
| ARC 2701 | Survey of Architectural History | 3 |
| BCN 1252 | Building Construction Drawing I | 4 |
| CGS 2060 | Introduction to Microcomputers | 3 |

### Upper Division Transfer Applicants

Completion of an Associate's degree in Pre-Architecture or related field or completion of at least 60 semester hours and submission of a portfolio is required of all upper division transfer applicants. All applicants will have their credentials reviewed by the Faculty Admissions Review Board prior to full admission into the program. Conditional admission can be granted pending review of credentials. Applicants should consult the department for specific information.

### Graduation Requirements

To graduate, students must complete all of the Lower Division Common Core requirements, General Education or Core Curriculum requirements for undergraduates as established by the university, all Upper Division Program Core Requirements for Architectural Technology and a portfolio review by a faculty jury.

All upper division students must complete a minimum of 69 semester hours to graduate, which include the following core requirements or their equivalent:

**Upper Division Program** (69 minimum)

**Major Requirements:** (66

| | | |
|---|---|---|
| ARC 3303 | Architectural Design 3 | 4 |
| ARC 3304 | Architectural Design 4 | 4 |
| ARC 3463 | Methods & Materials of Construction II | 3 |
| ARC 4058 | Computers in Architecture | 3 |
| ARC 4270 | Professional Office Practice | 3 |
| ARC 4324 | Architectural Design 5 | 4 |
| ARC 4335 | Architectural Design 6 | 4 |
| ARC 4342 | Architectural Design 7 | 4 |
| ARC 4343 | Architectural Design 8 | 4 |
| ARC 4783 | Architecture of the 19th & 20th Century | 3 |
| ARC or LAA | History or Theory Elective | 3 |
| BCN 3256 | Building Construction Drawing II | 4 |
| BCN 3402 | Structures 1 | 4 |
| BCN 3611 | Construction Cost Estimating | 3 |
| BCN 3720 | Construction Costs and Scheduling | 3 |
| BCN 4461 | Structures 2 | 3 |
| BCN 4462 | Structures 3 | 3 |
| BCN 4561 | Environmental Controls in Buildings | 4 |
| IND 4430 | Lighting Design | 3 |

**Electives**

Selected with an advisor to meet degree requirements and program objectives. (Minimum semester hours required: 3)

## Bachelor of Science in Interior Design

The Interior Design program is designed to enable graduates to work with other professionals such as architects and engineers in the design of commercial and institutional projects. The program incorporates the recommendations and standards of national and local professional societies and prepares students for work in a design firm or for self-employment at the professional level.

The interdisciplinary program allows students to integrate the technical, managerial, theoretical and design aspects of Interior Design.

The program has developed a strong relationship with the trade and practicing professionals exemplified by the Designers Lecture Series and Annual Festival of the Trees.

### Lower Division Preparation

To qualify for admission to the program, FIU undergraduates must have met all lower division university requirements including CLAST and must otherwise be acceptable to the program. In addition, FIU undergraduates with less than 48 semester hours must meet all of the University Lower Division Core Requirements

**Lower Division Common Core**

| | | |
|---|---|---|
| ARC 1131 | Graphic Communication I | 3 |
| ARC 1301 | Design 1 | 4 |
| ARC 1461 | Methods & Materials of Construction I | 3 |
| ARC 2132 | Graphic Communication II | 3 |
| ARC 2212 | Introduction to Design Theories | 3 |
| ARC 2302 | Design 2 | 4 |
| ARC 2701 | Survey of Architectural History | 3 |
| BCN 1252 | Building Construction Drawing I | 4 |
| CGS 2060 | Introduction to Microcomputers | 3 |

### Upper Division Transfer Applicants

Completion of an Associate's degree in Interior Design or related field or completion of at least 60 semester hours and submission of a portfolio. All applicants will have their credentials reviewed by the Faculty Admissions Review Board prior to full admission into the program. Conditional admission can be granted pending review of credentials. Applicants should consult the department for specific information.

### Graduation Requirements

To graduate, students must complete all of the Lower Division Common Core requirements, General Education or Core Curriculum requirements for undergraduates as established by the university, all Upper Division Program Core Requirements for Interior Design and a portfolio review by a faculty jury.

**Upper Division Program:** (61)

**Major requirements:** (55)

| | | |
|---|---|---|
| IND 3210 | Advanced Interior Design I | 4 |
| IND 4220 | Advanced Interior Design II | 4 |

| | | |
|---|---|---|
| IND 4221 | Institutional Interiors | 4 |
| IND 4441C | Fashion Design | 3 |
| IND 4905 | Thesis (Independent Study) | 4 |
| IND 2100 | History of Interiors I | 3 |
| IND 2130 | History of Interiors II | 3 |
| IND 4311 | Media & Methods of Presentation | 3 |
| IND 3423C | Sources, Materials & Cost Estimating for Interiors | 3 |
| IND 3450C | Interior Design Construction Drawing | 4 |
| IND 3451C | Interior Design Construction Drawing | 4 |
| IND 4430 | Lighting Design | 3 |
| BCN 4561 | Environmental Controls in Buildings | 4 |
| ARC 4270 | Professional Office Practice | 3 |
| ARC 4058 | Computers in Architecture | 3 |

**Electives**

Selected with an advisor to meet degree requirements and program objectives (minimum semester hours required): 6

## Course Descriptions

**Definition of Prefixes**

ARC-Architecture; IND-Interior Design; LAA-Landscape Architecture

**ARC 1131 Graphic Communication I (3).** The introductory graphic course. Basic techniques and materials: orthographic and isometric projections, perspective, freehand and mechanical drawings, lettering, pencil, ink, film, papers, and boards. Corequisite: ARC 1301.

**ARC 1301 Design Graphics I (4).** An introduction to the basic perceptual, social, cultural, environmental and technical issues of design. Corequisite: ARC 1131.

**ARC 1461 Methods and Materials of Construction I (3).** The first course in methods and materials. Physical and chemical properties of materials, manufacture, size and shape, and performance under normal loads in a variety of light construction assemblies. Corequisite: BCN 1252.

**ARC 2132 Graphic Communication II (3).** The second course in graphic communication. Students will develop presentation skills and broaden their visual experience. Presentations will incorporate two and three-dimensional design elements. Prerequisite: ARC 1131, ARC 2302 (Corequisite).

**ARC 2212 Introduction to Design Theories (3).** Introduction to the environmental parameters, morphological concepts and ideological principles that generate form and meaning in architecture and landscape architecture.

**ARC 2302 Design 2 (4).** Integration of the natural and built environments with psychological, functional, organizational, spatial and environmental forces. Prerequisite: ARC 1301, ARC 2131(Corequisite).

**ARC 2701 Survey of Architectural History (3).** Comprehensive study of architectural forms, styles and construction techniques throughout history.

**ARC 3133 Graphic Communication (3).** To develop the understanding and graphic skills necessary to the conception and communication of design and engineering technology. The course is flexible in order to accommodate different student backgrounds. Basic graphic methods and media including orthographic and isometric projection; one and two-point perspective; composition, lettering, and presentation techniques.

**ARC 3210 Architectural Concepts of Construction (3).** Introduction to principles of design and perception. Study of user's need relationship with environmental and human factors. Examination of architectural design ideas and their development. Prerequisite: ARC 3464 or equivalent.

**ARC 3303 Architectural Design 3 (4).** Methodology of planning and design of architectural projects. Solutions to design problems emphasizing space, form, textures, color, orientation, and structure. Prerequisites: ARC 1461, ARC 2302, and ARC 2212.

**ARC 3304 Architectural Design 4 (4).** Research on community design and affordable housing issues serves as a point of departure for the development of architectural design solutions focused on creating appropriate residential environments. Prerequisites: ARC 3303 and ARC 2701.

**ARC 3463 Methods and Materials of Construction II (3).** Methods, materials, and details of general construction emphasizing the physical and chemical properties of materials; the behavior of materials and assemblies under normal applied loads. Prerequisites: ARC 1461 and BCN 1252. Corequisite: BCN 3257.

**ARC 3464 Materials and Methods of Construction (3).** A study of the types of construction and materials used in buildings. How materials are properly installed and inspected, including the use of special equipment, in accordance to specifications, codes, standards, and agencies' recommendations.

**ARC 4058 Computer Applications in Architecture (3).** Advanced study of computer software packages applicable to the architecture office environment, with particular emphasis on CADD software, graphics packages and Desktop Publishing. Prerequisite: CGS 2060 or equivalent.

**ARC 4270 Professional Office Practice (3).** Assignments in office administration, negotiation of contracts, fee structure, client and public relations. Business organization, procedure scheduling and task allocation within an architectural office. Prerequisite: Departmental approval.

**ARC 4324 Architectural Design 5 (4).** Integration of cultural, aesthetic, environmental, economic, structural and programmatic determinants in the resolution of moderately complex architectural programs. Prerequisites: ARC 3304 and BCN 3402.

**ARC 4335 Architectural Design 6 (4).** Fundamentals of site planning and design. Emphasis is on the integration of building and site through careful consideration of spatial, environmental and formal characteristics of the project. Prerequisites: ARC 4324, ARC 3463, and ARC 4783.

**ARC 4342 Architectural Design 7 (4).** Integration of cultural, aesthetic, environmental, economic, structural and programmatic determinants in the resolution of complex architectural problems. Prerequisites: ARC 4335, BCN 4561, and ARC 3463.

**ARC 4343 Architectural Design 8 (4).** Architectural design solutions for complex problems requiring research and integration of innovative building concepts and state-of-the-art technological developments. Prerequisite: ARC 4342.

**ARC 4553 Structural Design (4).** Elements of structural design in steel, reinforced concrete, and timber, with design specifications per AISC, ACI and NDS. Introduction to prestressed concrete design. Loadings and structural elements commonly encountered in construction will be used for analysis and design. Prerequisite: BCN 3402 or equivalent.

**ARC 4696 Basic Utilities and Housing (3).** The study of the importance of basic utilities (such as roads, sewer and water supply systems) in housing planning and construction. A relative cost analysis. Health problems and sociological effects of lack of basic utilities. Innovative concepts to incorporate basic utilities to all housing projects in developing countries. Prerequisite: Permission of instructor.

**ARC 4710 History of Non-Western Architecture (3).** A historical analysis of the architecture produced by non-western civilizations, including Far Eastern, Pre-Columbian and Islamic architecture. Prerequisite: ARC 2701.

**ARC 4752 American and Colonial Architecture (3).** A study of architectural forms, patterns and styles reflecting colonial environments, including the United States, Southeast Asia and Post-Columbian America. Prerequisite: ARC 2701 or equivalent.

**ARC 4783 Architecture of the 19th and 20th Centuries (3).** A study of the development of architectural forms, styles and theories of the 19th and 20th centuries in relation to the socio-political and artistic evolution of the designed environment. Prerequisite: ARC 2701 or LAA 5715.

**ARC 4799 The Architecture and Landscape Architecture of South Florida (3).** Overview of the natural resources, cultural traditions and architectural precedents which have fomented the regionalist architecture and landscape architecture of South Florida. Prerequisite: Departmental approval.

**ARC 4905 Independent Study (1-5).** Specialized individual studies under supervision of faculty advisor. Consent of faculty advisor required. Prerequisite: Departmental approval.

**ARC 5176C Computer Practices in Design II (3).** Advanced study in concepts, issues and methods in computer-aided architectural design. Application of ARC 5175. Prerequisite: ARC 5175 or equivalent.

**ARC 5916 Innovations in Building Technology (3).** Experimental approach to new materials and methods applicable to the field of construction. Prerequisite: Permission of instructor.

**IND 2100 History of Interiors I (3).** An analysis of the history of architectural interiors, furniture and decorative arts from ancient times through the Neo-Classical Period. Prerequisite: ARC 2701.

**IND 2130 History of Interiors II (3).** An analysis of the history of architectural interiors, furniture and decorative arts from the Neo-Classical Period to the present. Prerequisite: IND 2100.

**IND 3210 Advanced Interior Design I (4).** Consideration and application of design criteria including floor, wall and ceiling materials and treatments, furniture selection and arrangement, illumination, ventilation, and selected architectural details. Prerequisite: Junior standing. Corequisite: IND 4311.

**IND 3422C Sources, Materials, and Cost Estimating for Interiors (3).** Sources and materials used by interior designers in the development of a design project. Materials available in the market for furniture finishes and equipment and its costs are analyzed. Prerequisite: IND 3210.

**IND 3423C Sources, Materials, and Cost Estimating for Interiors (3).** Sources and materials used by interior designers in the development of a design project. Materials available in the market for furniture finishes and equipment and its costs are analyzed. Prerequisite: IND 3210.

**IND 3450C Interior Design Construction Drawing (4).** Working drawings for interior designers including interior spaces and cabinet work detailing. Prerequisites: BCN 1252, ARC 1451, and ARC 3463.

**IND 3451C Interior Design Construction Drawing (4).** Working drawings for interior designers including interior spaces and cabinet work detailing. Prerequisites: BCN 1252, ARC 1451, and ARC 3463.

**IND 4220 Advanced Interior Design II (4).** Analysis, synthesis, articulation, and design execution of commercial spaces, integrating human factors, environmental-technological systems, activity structure, and symbiotic relationships as space design determinates. Prerequisites: IND 3210 and IND 4311.

**IND 4221 Institutional Interiors (4).** Analysis and synthesis of institutional functions, administrative controls, resources, constraints and policies in planning economic, behavioral, and environmental parameters. Prerequisite: Junior standing.

**IND 4311 Media and Methods of Presentations (3).** Applications of media and materials used in presentation of design concepts and programs to clients, groups, and organizations. Emphasis on various equipment and graphic techniques available, their application and use in simple and detailed communications. Corequisite: IND 3210.

**IND 4430 Lighting Design (3).** A fundamental course in lighting with emphasis on interaction with the design of an interior space. Prerequisites: BCN 4561 and IND 3210.

**IND 4441C Furniture Design (3).** Introduction to the human factors, concepts, function, materials and techniques of furniture design.

**IND 4501 Interior Design Practice (3).** The student will be introduced to the specific skills necessary to succeed in the practice of interior design such as business and client relations, office management, preparation of legal documents, marketing and billings. Prerequisites: BCN 3611 and IND 3210.

**IND 4905 Independent Study (Thesis) (VAR).** Simulated conditions of an interior design commission assuming all responsibilities of a professional interior designer, providing all required services including: cost estimate, contract, conceptual design drawings, selection of furniture and accessories, lighting systems, and treatment of walls, floors and ceilings. Prerequisite: Completion of Interior Design curriculum.

**LAA 3350 Landscape Design I (4).** Application of Basic Design principles to the design of landscape and garden. A general survey of design elements, restraints, plant materials, and other garden materials will aid the student to develop projects in a laboratory environment. Prerequisite: ARC 3133

**LAA 3712 History of Landscape (3).** A survey of landscape history throughout the ages. From the gardens of Mesopotamia, Roman and Islamic periods, the Monastery and Castle gardens of middle ages and the Renaissance, to the influence of Oriental gardens and the modern era. Prerequisite: Permission of instructor.

**LAA 5235 Theory of Landscape Architecture (3).** Critical review of the environmental parameters, morphological concepts and ideological principles that generate form and meaning in landscape architecture.

**LAA 5335 Site Development (3).** Issues, controls, and methods pertinent to the physiographic, topographical, and cultural determinants of site development. Prerequisite: LAA 5652 or equivalent.

**LAA 5371 Computer Practices in Design I (3).** Introduction to processes of site construction and design. Specifically, microclimate design principles, grading and earthwork calculations, hydrology and drainage, soil characteristics, construction materials and road alignment. Prerequisite: LAA 5652.

**LAA 5424 Landscape Construction I (3).** Study of materials and methods used in landscape construction. Introduction to manipulation and calculation of site work. Prerequisite: LAA 5335.

**LAA 5425 Landscape Construction II (3).** Production of complete set of landscape construction documents, including drawings and project manual with bidding documents, contract documents and technical specifications. Prerequisite: LAA 5424.

**LAA 5521 Natural Landscape Systems (3).** Environmental planning and landscape design issues will be related to an overview of basic ecosystems, plant materials and earth science concepts. Prerequisite: Departmental approval.

**LAA 5652 Interdisciplinary Design Studio I (6).** Introduction to two- and three-dimensional representational techniques. Fundamental geometric constructions, spatial theory, three-dimensional perception and color theory. Programmed designs are executed. Prerequisite: Departmental approval.

**LAA 5653 Landscape Architectural Design I (6).** Introduction to the design process and sources of form in landscape architecture. Projects focus on spatial composition and the use of landscape materials in the solution of design problems. Prerequisite: LAA 5652.

**LAA 5715 Architectural History and Theory (3).** An overview of architectural history, from the beginnings of western architecture and urban design to the 20th century, including current trends. Prerequisite: Departmental approval.

**LAA 5716 History of Landscape Architecture (3).** Historical survey of the principal sites and traditions manifested in the evolution of landscape architecture and urban design from antiquity to the present. Prerequisite: Consent of instructor. Departmental approval.

# Professional Certificate Programs

## Department of Retailing and Apparel Studies

### Advanced Fashion Design

To enter the program, students must have an Associate in Arts or Associate in Science in Fashion Design, or equivalent, or two years of industry experience in design. Students must have completed the following prerequisite courses or have industry experience in these areas: Patternmaking I and II, Draping I and II, Fashion Illustration, Garment Construction, and Design I and II. Students must pass a competency test prior to entering the program. A minimum grade of 'C' or better is required in all courses for completion of the certificate. Twenty-two semester hours are required to complete the certificate.

**Required Courses:** (23)

| | | |
|---|---|---|
| CTE 3755 | Advanced Pattern and Draping | 4 |

**Design Electives:** (Select four courses)

| | | |
|---|---|---|
| CTE 3771L | Menswear Design | 3 |
| CTE 3772L | Childrenswear Design | 3 |
| CTE 4729L | Design Seminar | 3 |
| CTE 4773L | Active Sportswear Design | 3 |
| CTE 4774L | Womenswear Design | 3 |
| CTE 4775L | Sportswear Design | 3 |

**General Electives** (Select three courses): (8)

| | | |
|---|---|---|
| CTE 3363L | Commercial Garment Production I | 3 |
| CTE 3748L | Pattern Grading | 2 |
| CTE 3733L | Fashion Illustration | 3 |
| CTE 3763L | Advanced Fashion Illustration | 3 |
| CTE 4767 | Apparel Quality Assurance | 3 |
| CTE 4768 | Industrial Apparel Assembly and Costing | 3 |

### Retailing Management

To enter the program, students must have completed at least two years of college. It is not necessary that prior college courses be in retail-related fields. A minimum grade of 'C' or higher is required in all courses for completion of the certificate.

**Required Courses:** (15)

| | | |
|---|---|---|
| CTE 1815 | Retail Operations | 3 |
| CTE 3761 | Merchandise Production and Distribution | 3 |
| CTE 3821 | Quantitative Decisions in Retailing | 3 |
| CTE 3823 | Retail Sales and Merchandising Strategies | 3 |
| CTE 4862 | Retail Organizational Management and Leadership | 3 |

**Retail Elective:** (Select two courses)

| | | |
|---|---|---|
| COA 2410 | Consumer Decisions | 3 |
| CTE 3401L | Survey of Textiles | 4 |
| CTE 4831 | Retail Inventory Management | 3 |
| CTE 4842 | Product Knowledge | 3 |
| CTE 4851 | Fashion Promotion | 3 |

## Department of Industrial Engineering

### Industrial Safety

The objective of the Professional Certificate Program in Industrial Safety is to present an integrated learning experience that will provide the student with a minimum level of expertise in the specialized area of Occupational Safety. Particular emphasis will be placed on application, interpretation and administration of the Federal Occupational Safety and Health Act and other regulations in an industrial setting.

The Certificate is intended to provide skills which will be directly applied in industry.

The Certificate will be awarded to any student who successfully completes a specified 18 credit program with a grade of "C" or higher.

### Production and Manufacturing

The objective of the Professional Certificate Program in Production and Manufacturing is to provide students desiring professional work in the field of Production and Manufacturing with a sequence of courses which will update those students already employed and will satisfy local industry's need for technologically skilled individuals in Production and Manufacturing. The Certificate includes courses designed to give the student knowledge of processes, cost, planning and control in addition to electives in specialized subjects.

The Certificate will be awarded to any student who successfully completes a specified 18 credit program with a grade of "C" or higher.

## Department of Mechanical Engineering

### Heating, Ventilation, and Air Conditioning Design

**Rene Leonard,** *Coordinator*

The purpose of this Professional Certificate program is to produce a learning experience that will enhance the design capabilities of professionals in the field. Emphasis will include engineering science background as well as practical applications of systems design.

Interested applicants must contact the department chairperson or the coordinator prior to registering for the program.

The Certificate will be awarded to a student who successfully demonstrates competency in:

| | | |
|---|---|---|
| EGN 3343 | Thermodynamics I (or equivalent) | 3 |
| EIN 3354 | Engineering Economy | 3 |
| EML 4601 | Refrigeration of Air Conditioning Principles | 3 |
| EML 4603 | Air Conditioning Design I | 3 |
| EML 4608 | Mechanical Systems in Environmental Control | 3 |
| EML 5606 | Advanced Air Conditioning Systems | 3 |
| | or | |
| EML 5615 | Computer Aided Design in A/C | 3 |

## Drinking Water Research Center

**William J. Cooper,** *Director*

The Drinking Water Research Center conducts basic and applied studies in the area of water resources as it relates to drinking water quality and quantity. The Center also provides the opportunity for undergraduate and graduate students to conduct independent research in cooperation with other departments in the University. See the General Information section 'Centers and Institutes' for more details regarding the Center.

### Staff

**William J. Cooper, Ph.D.** *(University of Miami), Associate Research Scholar/Scientist and Director*

**Ronald D. Jones, Ph.D.** *(Oregon State University), Assistant Professor*

**Frances Parsons, Ph.D.** *(University of Miami), Associate Research Scholar/Scientist.*

**Jose A. Amador, Ph.D.** *(Cornell University), Postdoctoral Research Associate*

**Laurie L. Richardson, Ph.D.** *(Oregon State University), Assistant Professor*

## College of Engineering and Design

*Dean* **Gordon R. Hopkins**

**School of Engineering**

*Associate Dean* **Gautam Ray**
*Acting Associate Dean* **Gustavo Roig**
*Director, Information Systems and External Programs* **Neil Hout-Cooper**

**School of Design**

*Associate Dean* **Adele Smith**

**Chairpersons:**

**School of Engineering**

*Civil and Environmental Engineering* **Oktay Ural**
*Electrical and Computer Engineering* **James R. Story**
*Industrial Systems and Engineering* **Fredrick Swift**
*Mechanical Engineering* **M. Ali Ebadian**

**School of Design**

*Retailing and Apparel Studies* **John Konarski, III**
*Construction Management* **José D. Mitrani, P.E.**
*Landscape Architecture/ Architectural Studies* **Leonardo Alvarez**

**Directors:**

*Drinking Water Research Center* **William J. Cooper**
*International Institute for Housing and Buildings* **Oktay Ural**
*Computer-Aided Engineering Center* **Neil Hout-Cooper**

**Coordinators:**

*FEEDS (Florida Engineering Educational Delivery Systems)* **Osiris Villacampa**
*STAC (Southern Technology Application Center)* **Osiris Villacampa**

### Faculty

**Adjouadi, Malek, Ph.D.** *(University of Florida), Assistant Professor, Electrical and Computer Engineering*

**Ahmad, Irtishad, Ph.D., P.E.** *(University of Cincinnati), Assistant Professor, Construction Management*

**Alvarez, Leonardo, MLA, AIA, ASLA** *(Harvard University), Assistant Professor, Chairperson, Landscape Architecture and Architectural Studies*

**Andrian, Jean, Ph.D.** *(University of Florida), Associate Professor, Electrical and Computer Engineering*

**Aurioles, Gabriel, Ed.D.** *(Florida Atlantic University), Associate Professor, Construction Management*

**Babij, Tadeusz, Ph.D.** *(Technical University, Wroclaw, Poland), Associate Professor, Electrical and Computer Engineering*

**Barnes, Wilson C., M.Arch, A.I.A.** *(University of Pennsylvania), Assistant Professor and Coordinator, Construction Management, Broward*

**Bueno, J. A., MLA, ASLA, P.E.** *(Harvard University) Assistant Professor, Landscape Architecture and Coordinator, Graduate Program in Landscape Architecture*

**Canaves, Jaime, MArch, AIA** *(University of Florida), Associate Professor, Interior Design/Architectural Studies*

**Canaves, Marta, MLA** *(Florida International University), Visiting Lecturer, Landscape Architecture/Architectural Studies*

**Carrasco, Hector R., Ph.D. P.E.** *(Texas A&M), Assistant Professor, Industrial Systems and Engineering*

**Cereijo, Manuel R., D.Sc., P.E.** *(Universidad Central), MSEE (Georgia Institute of Technology), Professor, Electrical and Computer Engineering*

**Chaudhari, Bhaskar S., Ph.D., P.E.** *(University of Pennsylvania), Professor, Construction Management*

**Chellalah, S., Ph.D.** *(Purdue University), Assistant Professor, Mechanical Engineering*

**Chen, Chin Sheng, Ph.D.** *(Virginia Polytechnic Institute and State University), Associate Professor, Industrial Systems and Engineering*

**Cooper, William, Ph.D.** *(University of Miami), Director, Drinking Water Research Center*

**Dong, Zhifeng, Ph.D.** *(Xi'an Jiaotong University), Visiting Research Associate Professor, Mechanical Engineering*

**Ebadian, Mohammed A., Ph.D.** *(Louisiana State University), Professor and Chairman, Mechanical Engineering*

**Farmer, Eugene D., M.Arch., A.I.A.** *(University of Illinois), Assistant Professor, Construction Management*

**Fennema, Robert J., Ph.D.** *(Washington State University), Assistant Professor, Civil and Environmental Engineering*

**Greenfield, Jeffrey H., Ph.D.** *(University of Pittsburgh), Assistant Professor, Civil and Environmental Engineering*

**Grossbard, Judy, Ph.D.** *(Florida State University), Assistant Professor, Retailing and Apparel Studies*

**Hagmann, Mark J., Ph.D.** *(University of Utah), Associate Professor, Electrical and Computer Engineering*

**Heimer, Malcolm L., Ph.D.** *(Penn State University), Associate Professor, Electrical and Computer Engineering*

**Hopkins, Gordon R., Ph.D.** *(University of Alabama), Professor; Mechanical Engineering, and Dean, College of Engineering and Design*

**Hout-Cooper, Neil M., Ph.D.** *(Florida Atlantic University), Assistant Professor and Director, Computer Aided Engineering Center, and Information Systems and External Programs*

**Howard, Greta, M.Sc.** *(Florida International University), Lecturer, Retailing and Apparel Studies*

**Jiang, Wei, Ph.D.** *(University of Illinois), Visiting Assistant Professor, Mechanical Engineering*

**Jones, Ronald, Ph.D.** *(Oregon State University), Associate Professor, Drinking Water Research Center*

**Jones, William K., Ph.D.** *(Massachusetts Institute of Technology), Associate Professor, Mechanical Engineering/ Electrical and Computer Engineering*

**Kengskool, Khokiat, Ph.D.** *(University of Missouri), Associate Professor, Industrial Systems and Engineering*

**Konarski III, John Ph.D.** *(Syracuse University), Chairperson and Assistant Professor, Retailing and Apparel Studies*

**Larkins, Grover L., Ph.D.** *(Case Western Reserve University), Assistant Professor, Electrical and Computer Engineering*

**Lee, Edward T., Ph.D. (University of California at Berkeley),** *Professor, Electrical and Computer Engineering*

**Lee, Shih-Ming, Ph.D.** *(Iowa State University), Associate Professor, Industrial Systems and Engineering*

**Leonard, Rene J., D.A., P.E.** *(University of Miami), Associate Professor, Mechanical Engineering*

**Levy, Cesar, Ph.D.** *(Stanford University), Associate Professor, Mechanical Engineering*

**Lopez-Mata, Gisela, M.S.** *(Pratt Institute), Assistant Professor, Interior Design and Coordinator, Undergraduate Program in Interior Design*

**Lozano, Jose M., MArch, AIA** *(Kent State University), Assistant Professor, Interior Design/Architectural Studies*

**Lulu, Menberu, Ph.D.** *(University of Alabama), Associate Professor, Industrial Systems and Engineering*

**Majzub, Iraj E., D Arch, RA** *(University of Torino), Professor, Landscape Architecture and Architectural Studies*

**Martinez, Sergio, D.Sc.** *(New York University), Associate Chairperson, Industrial Systems Engineering*

**Merkel, Robert S., Ph.D.** *(Institute of Textile Technology), Associate Professor, Retailing and Apparel Studies*

**Mitrani, José D., M.S., P.E., Engr.** *(University of Florida), Associate Professor and Chairperson, Construction Management*

**Mohammed, Osama A., Ph.D.** *(Virginia Polytech.), Professor, Electrical and Computer Engineering*

**Morad, A. Ayman Ph.D.** *(Virginia Polytechnic Institute and State University), Assistant Professor, Construction Management*

**Nunez, German, Ph.D.** *(Texas A&M University), Associate Professor, Industrial Systems and Engineering*

**Otazo, Julio O., M.A. Arch., R.A.** *(University of Florida), Assistant Professor, Construction Management*

**Park, Dong C., Ph.D.** *(University of Washington), Visiting Assistant Professor, Electrical and Computer Engineering*

**Prieto-Portar, Luis A., Ph.D. P.E.** *(Princeton University), Professor, Civil and Environmental Engineering*

**Radin, Ian, Ph.D.** *(University of Missouri), Visiting Associate Professor, Mechanical Engineering*

**Ray, Gautam, Ph.D.** *(Pennsylvania State University), Professor, Mechanical Engineering, and Associate Dean, School of Engineering*

**Richardson, Laurie, Ph.D.** *(University of Oregon), Assistant Professor, Drinking Water Research Center*

**Rolg, Gustavo, Ph.D.** *(University of Florida), Associate Professor, Electrical and Computer Engineering, and Acting Associate Dean, School of Engineering*

**Ruiz, Laura, M.S.** *(Florida International University), Instructor and Advisor, Electrical and Computer Engineering*

**Schmidt, Pierre, Ph.D.** *(Pennsylvania State University), Professor, Electrical and Computer Engineering*

**Schoephoerster, Richard, Ph.D.** *(University of Iowa), Visiting Assistant Professor, Mechanical Engineering*

**Shen, Lon-Il D., Ph.D., P.E.** *(Clemson University), Associate Professor, Civil and Environmental Engineering*

**Shirazinedjad, Ebrahim, Ph.D.** *(Technical University of Clausthal, West Germany), Visiting Assistant Professor, Mechanical Engineering*

**Smith, Adele E., M.S.** *(Auburn University), Associate Dean, School of Design and Associate Professor, Retailing and Apparel Studies*

**Story, James R., Ph.D.** *(University of Alabama), Chairperson and Associate Professor, Electrical and Computer Engineering*

**Subbarao, Wunnava V., Ph.D., P.E.** *(Andhra University), Professor, Electrical and Computer Engineering*

**Surti, Vasant H., Ph.D. P.E.** *(Catholic University of America), Professor, Civil and Environmental Engineering*

**Swift, Fredrick, Ph.D. P.E.** *(Oklahoma State University), Professor, Mechanical Engineering, Chairman and Professor, Industrial Systems and Engineering*

**Tall, Lambert, Ph.D., P.E.** *(Lehigh University), Professor, Civil and Environmental Engineering*

**Tansel, Berrin, Ph.D., P.E.** *(University of Wisconsin-Madison), Visiting Assistant Professor, Civil and Environmental Engineering*

**Tansel, Ibrahim, Ph.D.** *(University of Wisconsin-Madison), Assistant Professor, Mechanical Engineering*

**Thompson, LeRoy E., Ph.D., P.E.** *(Rice University), Professor, Civil and Environmental Engineering*

**Tinoco, Fernando, Ph.D.,** *(Iowa State University), Visiting Professor, Civil and Environmental Engineering*

**Ural, Oktay, Ph.D., P.E.** *(North Carolina State University), Director, International Institute for Housing and Buildings, Chairman and Professor, Civil and Environmental Engineering*

**Urban, Frank K., Ph.D.,** *(University of Florida), Associate Professor, Electrical and Computer Engineering*

**Wang, Ton-Lo, Ph.D., P.E.** *(Illinois Institute of Technology), Assistant Professor, Civil and Environmental Engineering*

**Wu, Kuang-Hsi, Ph.D. P.E.** *(University of Illinois), Associate Professor, Mechanical Engineering*

**Yang, Gao, Ph.D.** *(The Catholic University of America), Visiting Assistant Professor, Mechanical Engineering*

**Yen, Kang K., Ph.D.** *(Vanderbilt University), Associate Professor, Electrical and Computer Engineering*

**Yih, Tachung, Ph.D.** *(Catholic University of America) Assistant Professor, Mechanical Engineering*

# College of Health

The College of Health offers programs of professional study in the health professions and promotes articulation between the academic units and clinical, experiential settings. Approximately 300 different clinical centers are utilized in the various degree programs. The academic departments of the College offer courses of study leading to a baccalaureate degree in Dietetics and Nutrition, Medical Laboratory Sciences, Medical Record Administration, Occupational Therapy, Physical Therapy and Prosthetics and Orthotics. Master's degrees are offered in Dietetics and Nutrition, Medical Laboratory Science, Occupational Therapy, Physical Therapy, and Public Health. All degree programs are appropriately accredited by their respective professional accrediting body.

Applicants to the College must submit an Application for Admission to the University and must follow regular University procedures. Applicants must be eligible for admission to the University before being admitted to any degree program. Students interested in admission to any department or program in the College should contact the unit for specific prerequisites and admission requirements. Specialized admission procedures are required for the Dietetics Programs, Medical Laboratory Science, Occupational Therapy, Physical Therapy, and Prosthetics and Orthotics programs.

The mission of the College of Health is to:

1. Prepare health professionals at the undergraduate and graduate levels.

2. Perform basic applied research.

3. Provide services which respond to health needs at local, state, national, and international levels.

*Note:* The programs, policies, requirements and regulations listed in this catalog are continually subject to review, in order to serve the needs of the University's various publics, and to respond to the mandates of the Florida Board of Regents and the Florida Legislature, changes may be made without advance notice. Please refer to the General Information section for the University's policies, requirements, and regulations.

# Dietetics and Nutrition

**Katharine R. Curry,** *Professor, Chairperson and AP Director*

**Penelope S. Easton,** *Professor Emeritus*

**Evelyn B. Enrione,** *Assistant Professor and Plan V Program Director*

**Susan P. Himburg,** *Associate Professor and Director, Coordinated Undergraduate Program*

**Michele W. Keane,** *Assistant Professor*

**Nancy S. Wellman,** *Associate Professor*

The Department offers a major leading to a baccalaureate degree in dietetics and nutrition, and courses in nutrition for interested students. The Department offers a Master of Science degree in dietetics and nutrition with areas of concentration in clinical and community dietetics or dietetic management. The undergraduate programs are designed to assist the student to gain basic practitioner knowledge and skills. The graduate program prepares the student to assume leadership responsibilities in health care institutions, community health agencies, or private practice. The graduate program allows for concentration in research or field application.

## Bachelor of Science in Dietetics and Nutrition

### Coordinated Undergraduate Program

The Coordinated Undergraduate Program is currently granted accredited status by The American Dietetic Association Council on Education Division of Education Accreditation/Approval, a specialized accrediting body recognized by the Council on Post Secondary Accreditation and the United States Department of Education.

The student must make formal application to the program by March 1 before Fall admission. This special application form can be obtained from the department. Students must enroll in DIE 3005-Orientation to Dietetics the summer prior to Fall admission. Clinical courses are sequential and require two years to complete. Clinical experiences are available in several hospitals and other health agencies. Students must satisfactorily complete a written comprehensive exam to graduate from the program.

Students must receive a grade of 'C-' or higher in all courses in the department.

### Lower Division Preparation

Students desiring to major in general dietetics and nutrition need the following FIU course equivalents in addition to completing the general education requirements:

| | | |
|---|---|---|
| APB 2170 | Introductory Microbiology | 3 |
| APB 2170L | Introductory Microbiology Lab | 1 |
| CHM 1045 | General Chemistry I | 4 |
| CHM 1045L | General Chemistry I Lab | 1 |
| CHM 1046 | General Chemistry II | 3 |
| CHM 1046L | General Chemistry II Lab | 1 |
| CHM 3210 | Organic Chemistry I | 4 |
| CHM 3210 | Organic Chemistry I Lab | 1 |
| CHM 3211 | Organic Chemistry II | 3 |
| CHM 3211L | Organic Chemistry II Lab | 1 |
| | or | |
| CHM 3200 | Survey of Organic Chemistry | 3 |
| CHM 3200L | Survey of Organic Chemistry Lab | 1 |
| ECO 2013 | Macro Principles | 3 |
| FOS 3021 | Fundamentals of Food | 3 |
| FOS 3021L | Fundamentals of Food Lab | 1 |
| HUN 2201 | Principles of Nutrition | 3 |
| MAN 3025 | Organization and Management | 3 |
| PSY 2020 | Introduction to Psychology | 3 |
| SYG 2000 | Introduction to Sociology | 3 |

FIU undergraduates must have met all lower division requirements including CLAST, completed 60 semester hours, and must be otherwise acceptable into the program.

### Upper Division Program

#### Required Courses

**Junior Year**

**Summer Semester:** (2)

| | | |
|---|---|---|
| DIE 3005 | Orientation to Dietetics[1] | 2 |

**Fall Semester:** (16)

| | | |
|---|---|---|
| HUN 4403 | Life Cycle Nutrition | 3 |
| DIE 3317 | Dietetics in Community Health | 3 |
| DIE 3355 | Dietetics in Community Health Practicum[1] | 4 |
| FSS 3316 | Food Science for Institutions | 3 |
| PCB 3702 | Intermediate Physiology | 3 |

**Spring Semester:** (17)

| | | |
|---|---|---|
| DIE 3125 | Management of Dietary Systems | 3 |
| DIE 3175 | Management of Dietary Systems Practicum[1] | 6 |
| DIE 3244 | Diet Therapy I | 3 |
| DIE 3244L | Applied Diet Therapy | 2 |
| FOS 4041 | Food Science | 3 |
| FOS 4041L | Food Science Lab | 1 |

**Summer Semester:** (6)

| | | |
|---|---|---|
| HUN 4241 | Nutrition II | 3 |
| BCH 3023 | Introductory Biochemistry | 3 |

**Senior Year**

**Fall Semester:** (18)

| | | |
|---|---|---|
| DIE 4246 | Diet Therapy II | 3 |
| DIE 4277 | Diet Therapy II Practicum[1] | 6 |

| | | |
|---|---|---|
| DIE 4365 | Dietetic Management of Nutrition Programs | 3 |
| DIE 4377 | Applied Dietetic Management of Nutrition Programs | 2 |
| DIE 4435 | Dietetic Instruction and Counseling | 3 |
| DIE 4435L | Dietetic Instruction and Counseling Lab | 1 |

**Spring Semester:** (18)

| | | |
|---|---|---|
| DIE 4536 | Advanced Clinical Practicumin Dietetics[1] | 12 |
| DIE 4506 | Seminar in Dietetics and Nutrition | 3 |
| DIE 4564 | Independent Senior Research Dietetics | 3 |

[1]These courses are open only to students in the Coordinated Undergraduate Program, must be taken concurrently with the related dietetic courses, and must be taken in the order listed. Clinical experiences are supervised by the course instructors and are located in hospitals, health agencies, and school food service programs.

### Plan V Program

The Plan V program is currently granted approval status by the The American Dietetic Association Council on Education Division of Education Accreditation/Approval, a specialized accrediting body recognized by the Council on Post Secondary Accrediting and the United States Department of Education.

Upon completion of this program, students may apply to an accredited dietetic internship program or an approved Preprofessional Practice Program to obtain the professional experience required to become eligible to sit for the National Registration Examination for Dietitians.

To be admitted into the program, undergraduates must have met all the lower division requirements including CLAST, completed 60 semester hours, and must be otherwise acceptable into the program.

#### General Emphasis

#### Upper Division Program

**Required Courses**

| | | |
|---|---|---|
| DIE 3005 | Orientation to Dietetics | 2 |
| DIE 3125 | Management of Dietary Systems | 3 |
| DIE 3244 | Diet Therapy I | 3 |
| DIE 3244L | Applied Diet Therapy | 2 |
| DIE 3317 | Dietetics in Community Health | 3 |
| DIE 4246 | Diet Therapy II | 3 |
| DIE 4365 | Management of Nutrition Programs | 3 |
| DIE 4377 | Applied Dietetic Management of Nutrition Programs | 2 |
| DIE 4435 | Dietetic Instruction and Counseling | 3 |
| DIE 4435L | Dietetic Instruction and Counseling Lab | 1 |
| DIE 4506 | Senior Seminar | 3 |
| DIE 4564 | Independent Senior Research Dietetics | 3 |
| HUN 4241 | Nutrition II | 3 |
| HUN 4403 | Life Cycle Nutrition | 3 |
| FOS 4041 | Food Science | 3 |
| FOS 4041L | Food Science Lab | 1 |
| FSS 3316 | Food Science for Institutions | 3 |
| BCH 3023 | General Biochemistry | 4 |
| PCB 3702 | Intermediate Human Physiology | 3 |

**Recommended Electives**

Selected courses in areas: computer science, education, statistics, social work, health science, adult education, business, anthropology, sociology.

## Minor in Nutrition

A twelve-credit nutrition course sequence at the undergraduate level affords students the opportunity to study food and nutrients, their physiological functions, normal nutritional requirements, socioeconomic influences on food choices and other aspects of food technology. The required science foundation courses provide the necessary background of chemistry and biological sciences to understand the physiological and biochemical basis of nutrition, as a multi-disciplinary science with relevance to health. Students minoring in nutrition learn to interpret nutrition research and contemporary claims and theories as a basis for improving food habits.

**Minor Requirements**

| | | |
|---|---|---|
| HUN 2201 | Principles of Nutrition | 3 |
| HUN 4403 | Life Cycle Nutrition | 3 |
| HUN 4241 | Nutrition II[1] | 3 |

[1]Prerequisite: Human Physiology, Organic Chemistry; Corequisite: Biochemistry

**In addition, one of the following courses:**

| | | |
|---|---|---|
| HUN 3191 | World Prospects and Issues: Nutrition | 3 |
| FOS 3021 | Fundamentals of Food and | 3 |
| FOS 3021L | Fundamentals of Food Lab | 1 |
| FOS 3004 | Food and the Consumer | 3 |
| FOS 4041 & FOS 4041L | Food Science[1] | 4 |

[1]Prerequisite: FOS 3021, FOS 3021L, and HUN 2201

## Course Descriptions

**Definition of Prefixes**

DIE-Dietetics; FOS-Food Science; FSS-Food Service Systems; HUN-Human Nutrition

**DIE 3005 Orientation to Dietetics (2).** Survey of role and responsibilities of the dietitian. Legal and ethical considerations necessary for the student dietitian in clinical experiences. Educational and personal qualifications for specialization in dietetics. Prerequisite: Application to the Coordinated Undergraduate Program or Plan V Program.

**DIE 3125 Management of Dietary Systems (3).** Survey of various types of institutional food service systems; management concepts in planning, implementing, and evaluating food service systems. Prerequisites: Basic Management, Quantity Food Preparation.

**DIE 3175 Management of Dietary Systems Practicum (6).** Developing skills for DIE 3125. Clinical assignments in several food service institutions in this area. Clinical component: open only to students in the Coordinated Undergraduate Program. Prerequisite: DIE 3355.

**DIE 3244 Diet Therapy I (3).** Techniques of adjusting nutrients and food intake to accommodate medical treatments and previous nutriture. Menu writing and analysis, translation of dietary prescriptions, techniques of dietary instruction, dietary histories. Prerequisites: HUN 2201, DIE 3317, HUN 4403, Physiology.

**DIE 3244L Applied Diet Therapy (2).** Observation and participation in dietary treatment activities in clinical institutions and simulated settings; application of menu writing, techniques of diet history and instruction. Corequisite: DIE 3244.

**DIE 3317 Dietetics in Community Health (3).** Study of community agencies providing nutrition guidance for differing age groups. Emphasis on nutritional and educational needs of clients. Prerequisites: HUN 2201, DIE 3005. Prerequisite or Corequisite: HUN 4403.

**DIE 3355 Dietetics in Community Health Practicum (4).** Observation and participation in activities of community agencies. Nutrition education and counseling experiences. Clinical component: Open only to students in the Coordi-

nated Undergraduate Program. Corequisite: DIE 3317.

**DIE 4195 Special Problems in Dietetic Administration (1-3).** In-depth study of a problem in dietetic administration chosen to coincide with a student's interest and career goals. Student will develop objectives stated in behavioral terms and demonstrate skills in information gathering, analysis, and technical writing. Prerequisite: Permission of instructor.

**DIE 4246 Diet Therapy II (3).** Study of the complex dietetic problems accompanying metabolic disorders. Determination of nutrient requirements based on medical and individual needs. Prerequisites: DIE 3244, DIE 3244L.

**DIE 4277 Diet Therapy II Practicum (6).** Participation in activities in clinical affiliations focusing on nutritional assessment, planning, treatment and follow-up of patients. Clinical component: open only to students in the Coordinated Undergraduate Program. Corequisite: DIE 4246.

**DIE 4296 Special Problems in General Dietetics (1-3).** In-depth study of a problem chosen to coincide with student's interest and career goals. Student develops behavioral objectives and demonstrates skills in information gathering, analysis and technical writing. Prerequisite: Permission of instructor.

**DIE 4365 Dietetic Management of Nutrition Programs (3).** Advanced concepts of managerial functions as an institutional consultant, a member of a community nutrition program, a private therapeutic consultant, full time institutional food service administrator. Advanced standing required. Prerequisites: DIE 3125 or permission of instructor, basic competency in management principles. Corequisite: DIE 4377.

**DIE 4377 Applied Dietetic Management of Nutrition Programs (2).** Observation and participation in community agencies, institutions, and simulated setting the development of entry level competencies in the management of nutrition and food service programs. Corequisite: DIE 4365.

**DIE 4435 Dietetic Instruction and Counseling (3).** Motivational methods and instructional techniques for development of entry level competencies. Advanced standing in dietetics required. Pre or corequisite: DIE 4246. Corequisite: DIE 4435L.

**DIE 4435L Dietetic Instruction and Counseling Lab (1).** Small group video recorded practice in dietetic instruction and counseling. Prerequisite: Advanced standing in dietetics. Corequisite: DIE 4435.

**DIE 4506 Seminar in Dietetics and Nutrition (3).** Professional skills development for career effectiveness in today's job world; emphasis on speaking and writing related to contemporary nutrition issues. Majors only, senior standing.

**DIE 4536 Advanced Clinical Practicum in Dietetics (12).** In-depth study combining theoretical concepts and clinical experience. Learning experience planned cooperatively by the student, campus instructor, and clinical instructor to meet student needs and goals. Prerequisites: DIE 4246, DIE 4277, and permission of Director of the Coordinated Undergraduate Program. Clinical component: Open only to students in the Coordinated Undergraduate Program.

**DIE 4564 Independent Senior Research in Dietetics (3).** Research methodology for planning, conducting and analyzing a study in applied dietetics. Students will design a protocol, collect data, analyze and present results/conclusions.

**FOS 3004 Food and the Consumer (3).** Study of purchasing, storage, and preparation of food. Consideration of life style influences on food choices. Designed to develop skills in purchasing and preparing foods to meet personal, social, and physical needs. Demonstration laboratory included.

**FOS 3021 Fundamentals of Food (3).** Study of selection, processing, and preparation of food with attention to quality and nutrient retention. Corequisite: FOS 3021L.

**FOS 3021L Fundamentals of Food Laboratory (1).** Techniques of food preparation to maintain nutrients and food quality. Corequisite: FOS 3021.

**FOS 4041 Food Science (3).** Physical and chemical changes in food occurring as a result of various methods of processing, preparation, and storage. Prerequisites: Organic Chemistry, HUN 3122 or HUN 2201, FOS 3021, or equivalents. Corequisite: FOS 4041L.

**FOS 4041L Food Science Laboratory (1).** Experimental laboratory in the physical and chemical characteristics of food. Corequisite: FOS 4041.

**FSS 3316 Food Science For Institutions (3).** Proper food handling in institutional settings with use of sound management principles closely coordinated with food science advances and government regulations. Laboratory and field trips to strengthen theoretical concepts. Prerequisite: FOS 3021.

**HSC 1001C Perspectives of Health Science Professions (3).** A study of public health issues, disease, preventive medicine and wellness as they relate to nutrition, medical laboratory sciences, physical and occupational therapy. Utilizes lab and field work.

**HUN 2201 Principles of Nutrition (3).** Nutrients and their inter-relationships, requirements of individuals, and food sources. Investigates current controversies, fads/fallacies, and health related issues. Recommended for non-majors.

**HUN 3122 Nutrition and Culture (3).** Study of the scientific principles of nutrition and impact of culture on nutrition and health. Recommended for Junior-Senior non-majors.

**HUN 3191 World Prospects/Issues: Nutrition (3).** Exploration of food production, distribution, and consumption patterns of selected nations. Analysis of variables affecting nutritional intake and change, and hunger.

**HUN 4241 Nutrition II (3).** Roles of nutrients in metabolic processes. Effects of excesses and deficiencies. Prerequisites: Organic Chemistry, Physiology, and HUN 2201 or equivalent. BCH 3023 pre- or corequisite.

**HUN 4403 Life Cycle Nutrition (3).** Nutrient requirements, dietary adequacy, food habits, special nutritional concerns during pregnancy, infancy, childhood, adolescence, and adulthood including aging. Prerequisite: HUN 2201 or HUN 3102.

## Medical Laboratory Sciences

**Janet A. Lineback,** *Professor and Chairperson*
**Barbara V. Anderson,** *Assistant Professor and Director, Medical Technology Program*
**Jerry A. Bash,** *Associate Professor*
**Manoucher Dezfulian,** *Associate Professor*
**William J. Keppler,** *Professor and Dean*
**Patrick F. Shen,** *Associate Professor*
**Sylvia L. Smith,** *Associate Professor*
**Beverly A. Warden,** *Assistant Professor*

Medical technologists perform complex biological and chemical analyses on blood and other specimens to enable

the physician to diagnose and treat disease. Individuals wishing to pursue a career in medical technology should have a strong science background with emphasis on laboratory analytical skills. They must be reliable, conscientious, interested in helping others, and recognize their responsibility for human lives in the practice of modern medicine. Students receive intensive didactic and laboratory training in the areas of clinical chemistry, hematology, immunohematology, and microbiology. Opportunities for employment exist in hospital, government, and industrial clinical laboratories, academic and industrial research laboratories, and in sales and technical services in clinical diagnostic products industries.

The program is approved by the AMA Committee on Allied Health Education and Accreditation (CAHEA). A graduate of the program is eligible to apply for examination and certification by the American Society of Clinical Pathologists' Board of Registry as a Medical Technologist, MT (ASCP); by the National Certification Agency for Medical Laboratory Personnel as a Clinical Laboratory Scientist, CLS (NCA); and for licensure as a Medical Technologist by the State of Florida. Clinical practice is conducted at Baptist, Cedars, Coral Gables, Jackson Memorial, Mercy, South Miami Hospitals and the American Red Cross Blood Services, South Florida Region, in Dade and Memorial Hospital in Broward.

## Bachelor of Science in Medical Technology

### Lower Division Preparation

The student seeking admission to professional MLS courses should have: (1) completed a minimum of 60 semester hours in an accredited two or four-year institution, (2) completed all of the general education requirements, (3) earned a minimum cumulative GPA average of 2.5, (4) earned a minimum cumulative GPA of 2.0 in required science courses, (5) completed the following preparatory courses: two semesters of general biology with laboratory, two semesters of general chemistry with laboratory, two semesters of organic chemistry with laboratory, one semester of quantitative analysis chemistry with laboratory, one semester of general microbiology with laboratory, one semester of pre-calculus mathematics, one semester of computer science, and one semester of anatomy or physiology, or both, with laboratory. (Survey or introductory courses in science and mathematics are not acceptable.) Credits in general microbiology or biochemistry, or both, which are more than seven years old must be repeated.

FIU undergraduates must have met all the lower division requirements including CLAST, completed 60 semester hours, and must be otherwise acceptable into the program.

### Upper Division Program

The University-integrated '2+2' program has limited enrollment. Students are usually admitted to the program in Summer Semester, but may be admitted on a space-available basis in any semester providing prerequisite and corequisite courses have been completed. It is recommended that applications for Summer Semester be received by March 1 but applications will be processed throughout Spring Semester on a space-available basis. An interview may be required. The medical technology professional courses and hospital clinical practice are open only to majors in the program (or by permission of instructor). Entrance to clinical practice depends upon satisfactory evaluation of the student's record by the faculty. Students must satisfactorily complete a written comprehensive examination to graduate from the program.

### Required Courses

#### Freshman Year

**Fall Semester:** (19)

| | | |
|---|---|---|
| BSC 1010 | General Biology I | 3 |
| BSC 1010L | General Biology I Lab | 2 |
| CHM 1045 | General Chemistry | 4 |
| CHM 1045L | General Chemistry Lab | 1 |
| MAC 2132 | Pre-Calculus Math | 3 |
| ENC 1101 | English Composition | 3 |
| Humanities Elective | | 3 |

**Spring Semester:** (18)

| | | |
|---|---|---|
| BSC 1011 | General Biology II | 3 |
| BSC 1011L | General Biology II Lab | 2 |
| CHM 1046 | General Chemistry II | 3 |
| CHM 1046L | General Chemistry II Lab | 1 |
| CGS 2060 | Intro. To Microcomputers | 3 |
| ENC 1102 | English Composition | 3 |
| Social Science Elective | | 3 |

#### Sophomore Year

**Fall Semester:** (20)

| | | |
|---|---|---|
| PCB 3702 | Intermediate Human Physiology | 3 |
| PCB 3702L | Intermediate Human Physiology Lab | 1 |
| | or | |
| ZOO 3731 | Human Anatomy | 3 |
| ZOO 3731L | Human Anatomy Demonstration | 1 |
| CHM 3210 | Organic Chemistry I | 3 |
| CHM 3210L | Organic Chemistry I Lab | 2 |
| CHM 3120 | Quantitative Analysis | 4 |
| CHM 3120L | Quantitative Analysis Lab | 1 |
| English Composition - Technical Report Writing Elective | | 3 |
| Humanities Elective | | 3 |

**Spring Semester:** (14)

| | | |
|---|---|---|
| MCB 3023 | General Microbiology | 3 |
| MCB 3023L | General Microbiology Lab | 1 |
| CHM 3211 | Organic Chemistry II | 3 |
| CHM 3211L | Organic Chemistry II Lab | 1 |
| English Composition - Technical Report Writing Elective | | 3 |
| Social Sciences Elective | | 3 |

**Summer Semester:** (3)

| | | |
|---|---|---|
| MLS 3038 | Basic Techniques in MLS | 3 |

#### Junior Year

**Fall Semester:** (14)

| | | |
|---|---|---|
| BCH 3023 | General Biochemistry | 4 |
| MLS 3605 | Clinical Instrumentation | 2 |
| MLS 3605L | Clinical Instrumentation Laboratory | 1 |
| MLS 4405 | Clinical Microbiology | 4 |
| MLS 4405L | Clinical Microbiology Laboratory | 3 |

**Spring Semester:** (19)

| | | |
|---|---|---|
| MLS 4505 | Clinical Immunology | 1 |
| MLS 4505L | Clinical Immunology Laboratory | 2 |
| MLS 4461 | Advanced Microbiology | 3 |
| MLS 4625 | Clinical Chemistry Methods | 4 |
| MLS 4625L | Clinical Chemistry Laboratory | 4 |
| PCB 4233 | Immunology | 3 |

**Summer Semester:** (12)

| | | |
|---|---|---|
| MLS 3430 | Medical Parasitology | 2 |
| MLS 3430L | Medical Parasitology Lab | 1 |
| MLS 4306 | Clinical Hematology | 4 |
| MLS 4306L | Clinical Hematology Laboratory | 3 |
| MLS 4755C | Laboratory Statistics and Quality Control | 2 |

#### Senior Year

**Fall Semester:** (15)

| | | |
|---|---|---|
| MLS 4070 | Orientation to Clinical Rotation | 1 |
| MLS 4334 | Clinical Coagulation | 1 |
| MLS 4334L | Clinical Coagulation Laboratory | 1 |
| MLS 4535 | Immunohematology | 4 |
| MLS 4535L | Immunohematology Laboratory | 3 |
| MLS 4630 | Advanced Clinical Chemistry | 3 |
| MLS 4705 | Laboratory Management | 1 |
| MLS 4934 | Senior Seminar | 1 |

**Spring Semester:** (12)

| | | |
|---|---|---|
| MLS 4820L | Clinical Practice/ Chemistry | 3 |
| MLS 4821L | Clinical Practice/ Microbiology | 3 |
| MLS 4822L | Clinical Practice/ Hematology | 3 |
| MLS 4823L | Clinical Practice/Blood Bank and Immunology | 3 |

## Minor in Medical Laboratory Sciences

The minor program is aimed at biological and chemical sciences majors who wish to develop expertise in a related area of medical laboratory sciences, and who may wish to seek hospital or clinical diagnostics and industrial employment after graduation. The minor requires 18-26 semester hours in MLS depending on specialization area. Contact the department for details.

## Course Descriptions

### Definition of Prefixes

MLS - Medical Laboratory Sciences

**MLS 2030 Introduction to Medical Laboratory (1).** An introduction to the structure and functions of a medical laboratory including test procedures, terminology, safety, and laboratory tours. Not for MLS majors.

**MLS 3038 Basic Techniques in Medical Laboratory Sciences (3).** Lecture and laboratory introducing the profession of medical laboratory sciences and basic laboratory skills including venipuncture, laboratory calculations, terminology and medical laboratory safety. Prerequisite: Permission of the instructor.

**MLS 3220 Clinical Microscopy (1).** Introduction to the structure and physiology of the kidney, CSF and other biological fluids. The clinical significance of various findings in the urine CSF, and other biological fluids are discussed. Prerequisite: MLS 4306 or permission of the instructor. Corequisite: MLS 3220L.

**MLS 3220L Clinical Microscopy Laboratory (2).** Laboratory to accompany MLS 3220, dealing with routine procedures for urinalysis, microscopic examination of urine, semen, CSF, and other biological fluids. Corequisite: MLS 3220.

**MLS 3240L Medical Mycology Laboratory (1).** Laboratory to accompany MLS 5425.

**MLS 3430 Medical Parasitology (2).** Classification, morphology, and life cycles of medically significant parasites. Emphasis is on microscopic identification, specimen processing/examination, and infection control. Prerequisite: General Biology with Laboratory.

**MLS 3430L Medical Parasitology Laboratory (1).** Laboratory to accompany MLS 3430.

**MLS 3605 Clinical Instrumentation (3).** Fundamentals of clinical laboratory instrumentation including basics of electricity and electronics, preventive maintenance, and quality control procedures will be emphasized. Prerequisites: CHM 3120 and CHM 3120L or equivalent.

**MLS 3605L Clinical Instrumentation Lab (1).** Laboratory to accompany MLS 3605. Introduction to the operation, applications, and preventive maintenance of clinical laboratory instruments. Quality control procedures. Corequisite: MLS 3605.

**MLS 3700 Management Procedures for Laboratory Employees (1).** Job descriptions, salary schedules, equipment and reagent purchasing, quality assurance programs, work-load recording methods. Individualized projects adapted to meet the needs of facility where student is employed. Prerequisite: One year of clinical laboratory experience.

**MLS 3750 Laboratory Quality Control, Safety, and Instrument Maintenance (3).** Course designed for the working technologist who wishes to protect himself, his coworkers, and others in his environment from the hazards inherent in laboratory operations, and who wishes to present better evidence of compliance with the various inspection and accreditation organizations which now inspect laboratories. Prerequisite: One year of clinical laboratory experience.

**MLS 4070C Orientation to Clinical Rotation (1).** Introduction to hospital environment and patient care. Medical ethics. Clinical facilities tour. Seniors only.

**MLS 4306 Clinical Hematology (4).** A basic course in the origin of erythrocytes and leukocytes, their morphology and function. Mechanisms, manifestations, and abnormal laboratory findings of hematologic diseasea and urinalysis. Prerequisite: BCH 3023 or permission of instructor.

**MLS 4306L Clinical Hematology Laboratory (3).** Laboratory to accompany MLS 4306, dealing with manual and automated procedures for determining complete blood and platelet counts. Urinalysis and clinical microscopy.

**MLS 4334 Clinical Coagulation (1).** A basic course in the study of coagulation factors, platelets, the fibrinolytic system, platelet aggregation. Prerequisite: MLS 4306 or permission of instructor.

**MLS 4334L Clinical Coagulation Laboratory (1).** Laboratory to accompany MLS 4334, dealing with manual and automated procedures for determining coagulation factor deficiencies and platelet function.

**MLS 4405 Clinical Microbiology (4).** Methods for the isolation and identification of clinically significant organisms. Epidemiology, symptoms, diagnosis and treatment of infectious diseases. Mechanisms of microbial infection. Host immunity. Prerequisite: MCB 3023 and MCB 3023L or equivalent. Corequisite: BCH 3023.

**MLS 4405L Clinical Microbiology Laboratory (3).** Laboratory to accompany MLS 4405. Isolation and identification of normal and pathogenic flora from genuine and simulated clinical specimens. Identification of clinically significant fungi.

**MLS 4461C Advanced Microbiology (3).** Lectures and laboratory. Identification of rare pathogens including Chlamydia and Rickettsia. Virology and tissue culture techniques. Mode of action of bacterial resistance to antibiotics. Prerequisites: MLS 4405 and BCH 3023 or permission of instructor.

**MLS 4465 Selected Topics in Microbiology (3).** Current topics in Microbiology of clinical significance. Review of literature and discussion of the selected topics. Prerequisite: Permission of the instructor.

**MLS 4505 Clinical Immunology (1).** Study of immunological procedures employed by the clinical laboratory for the diagnosis of diseases such as rheumatoid arthritis, infectious mononucleosis, syphilis. Pre or Corequisite: PCB 3233.

**MLS 4505L Clinical Immunology Laboratory (2).** Diagnostic procedures and techniques performed in a clinical immunology laboratory such as precipitation, agglutination, syphilis serology and other immunoassays. Laboratory to accompany MLS 4505.

**MLS 4535 Immunohematology (4).** Fundamental of blood banking including blood group systems, pretransfusion testing methods, hemolytic disease of the newborn, HLA, blood component therapy, and adverse effects of transfusion. Prerequisites: PCB 3233, MLS 4505, and MLS 4505L.

**MLS 4535L Immunohematology Laboratory (3).** Laboratory to accompany MLS 4535.

**MLS 4550C Advanced Immunohematology (1).** In depth study of Transfusion Therapy, the use and preparation of blood components, and special problems in blood banking. Lectures and laboratory. Prerequisite: MLS 4535.

**MLS 4555 Selected Topics in Immunohematology (3).** Current topics in Blood Banking of clinical significance. Review of literature and discussion of the selected topics. Prerequisite: Permission of the instructor.

**MLS 4625 Clinical Chemistry Methods (4).** Procedures for analysis of carbohydrates, proteins, lipids, enzymes, electrolytes and drugs. Interpretation of biochemical tests used in the diagnosis and treatment of disease. Renal, liver, and cardiac function profiles. Prerequisites: MLS 3605, MLS 3605L, and BCH 3023.

**MLS 4625L Clinical Chemistry Laboratory (4).** Laboratory to accompany MLS 4625.

**MLS 4630 Advanced Chemistry (3).** Analysis of thyroid hormones, estrogens, adrenal hormones and metabolites, immunoassay, radioisotope measurement, amniotic fluid analysis, toxicology, multichannel analyzers, and chromatographic methods. Prerequisite: MLS 4625.

**MLS 4630L Advanced Chemistry Laboratory (2).** Elective topics in laboratory to accompany MLS 4630.

**MLS 4635 Selected Topics in Clinical Chemistry (3).** Current topics in Clinical Chemistry of particular clinical significance. Review of literature and discussion of the selected topics. Prerequisite: Permission of the instructor.

**MLS 4705 Laboratory Management (1).** Personnel handling, laboratory records, equipment and reagent purchasing, laboratory computerization, quality assurance programs, workload recording programs, scheduling and methods of laboratory self-evaluation. Seniors only.

**MLS 4755C Laboratory Statistics and Quality Control (2).** Lecture topics to be covered include basic laboratory statistics, linear regression and correlation analysis, quality control charting techniques, new method evaluation, problem solving using computer programs. Seniors only.

**MLS 4820L Clinical Practice Chemistry (3).** Practical experience in a hospital chemistry laboratory. All MLS courses must be completed before students will be permitted to register for clinical practice.

**MLS 4821L Clinical Practice Microbiology (3).** Practical experience in a hospital microbiology laboratory.

**MLS 4822L Clinical Practice Hematology (3).** Practical experience in a hospital hematology laboratory.

**MLS 4823L Clinical Practice Blood Bank and Immunology (3).** Practical experience in a hospital blood bank and immunology laboratory.

**MLS 4905 Independent Study (1-3).** Special work, directed readings, lecture and/or laboratory assignment, determined by advisor in accord with student's interests. Prerequisite: Permission of advisor.

**MLS 4910 Directed Independent Research (1-6).** Investigation of a problem in hematology, clinical microbiology, immunohematology and clinical chemistry requiring independent research directed and supervised by the instructor. Prerequisite: Permission of instructor.

**MLS 4934 Senior Seminar (1).** Preparation and presentation of literature review and individualized projects. Instructional methods.

## Medical Record Administration

**Elizabeth M. Johnson,** *RRA, Director and Assistant Professor*

**Renee Klarberg,** *RRA, Clinical Coordinator*

The major in Medical Record Administration prepares the student for the variety of responsibilities and functions involved in the management of a Medical Record Department. Medical Record Administrators design and supervise systems relating to the collection, analysis, retention, retrieval and evaluation of medical records. The priorities of the position include maintaining complete, accurate and timely medical records, assisting the medical staff, and developing and implementing policies and procedures which adhere to the ethical, financial, and legal requirements and meet the accreditation standards established for the health care facility.

The Medical Record Administration Program is accredited by the Committee on Allied Health Education and Accreditation of the American Medical Association in collaboration with the Council on Education of the American Medical Record Association. Graduates are eligible to take the National Registration Examination and become a credentialed Registered Record Administrator (R.R.A.) upon the successful completion of this exam.

### Bachelor of Science in Medical Record Administration

**Prerequisite Courses**

Anatomy and Physiology including laboratory; Statistics; Microbiology or Epidemiology.

To qualify for admission to the program, FIU undergraduates must have met all the lower division requirements including CLAST, completed 60 semester hours with a minimum 2.0 cumulative GPA, and must be otherwise acceptable into the program.

**Upper Division Program:** (60)

**Required Courses**[1]: (60)

| | | |
|---|---|---|
| HSC 3531 | Medical Terminology | 3 |
| HSC 3642 | Legal Aspects of Medical Records | 3 |
| MRE 3110 | Medical Record Administration I | 3 |
| MRE 3202 | Basic Coding Procedures | 3 |
| MRE 3205 | Medical Record Administration II | 4 |
| MRE 3312 | Medical Record Management I | 3 |
| MRE 3431 | Fundamentals of Medical Science I | 3 |
| MRE 3432 | Fundamentals of Medical Science II | 3 |
| MRE 3800 | Directed Practice I | 1 |
| MRE 3810 | Directed Practice II | 1 |
| MRE 4204 | Advanced Coding | 3 |
| MRE 4211 | Medical Record Information Systems | 3 |
| MRE 4304 | Problems in Medical Record Administration | 3 |
| MRE 4344 | Medical Record Management II | 4 |
| MRE 4400 | Health Care Records: Multi-Institutional | 3 |
| MRE 4415 | Medical Record Administration III | 3 |
| MRE 4831 | Directed Practice III | 1 |
| MRE 4835 | Internship in Medical Record Management | 4 |

**Support Courses**[1]

| | | |
|---|---|---|
| HSA 4170 | Health Care Financial and Accounting Management | 3 |

| | | |
|---|---|---|
| HSA 4184 | Human Resources Management and Supervision | 3 |
| HSA 4192 | Health Management and Systems Engineering | 3 |

[1]Must earn a minimum grade of 'C' (2.0) in each course. Grade of 'C-' or below must be repeated.

## Course Descriptions

### Definition of Prefix

MRE-Medical Record Administration; HSA - Health Services Administration; HSC- Health Science Concentration.

**HSC 3531 Medical Terminology (3).** Provides the student with basic medical language skills, including pronunciation, spelling, and definitions necessary for communication in the medical world.

**HSC 3642 Legal Aspects of Medical Records (3).** Consideration of Medical Record as legal document to include general introduction to law, release of information, and legal actions.

**MRE 3110 Medical Record Administration I (3).** Introduces the student to the historical development of medical record science; role and function of the medical record administrator; professional ethics; flow of the medical record from patient admission to completion of the record after discharge; numbering and filing systems. The medical record: content and format, value and standards for health care facilities.

**MRE 3202 Basic Coding Procedures (3).** Concepts and principles of nomenclatures and classification systems used to record and compare health data. Development of ICD-9-CM coding skills and applications for research. Prerequisites: Anatomy and physiology with laboratory and medical terminology.

**MRE 3205 Medical Record Administration II (4).** In-depth study of hospital statistics covering sources, definitions, collection and reporting of data by Medical Record Department. Principles of research defined. Microcomputer Lab included.

**MRE 3312 Medical Record Management I (3).** General principles of management of a medical record system in any type of health care facility, including hospitals, intermediate and long term care facilities, clinics, HMO's etc. The basic concepts of management as related to the health care industry are addressed.

**MRE 3431 Fundamentals of Medical Science I (3).** A systematic review of organ systems, arranged by medical specialties. Typical chart data will be included, with representative information characteristic of history and physical examination, laboratory, x-ray data, and nursing notes. Specialties covered are internal medicine, pediatrics, obstetrics and gynecology. Prerequisites: Anatomy and Physiology and Medical Terminology.

**MRE 3432 Fundamentals of Medical Science II (3).** A systematic review of organ systems, arranged by medical specialties. Typical chart data will be included, with representative information characteristic of history and physical examination, laboratory, x-ray data, and nursing notes. Specialties covered are general surgery, neurosurgery, neurology, and orthopedics. Prerequisites: Anatomy and Physiology and Medical Terminology.

**MRE 3800 Directed Practice I (1).** Orientation of the student to the hospital medical record department and adjunct diagnostic or therapeutic units; including the outpatient department, emergency room, admitting office, x-ray, pharmacy, physical therapy, laboratory, and pathology department.

**MRE 3810 Directed Practice II (1).** Orientation of the student to medical record department functions. Rotation of the student through technical functions of the department, following the flow of the patient's record after discharge. Includes the discharge procedure; analysis, coding and indexing systems; statistical reporting; correspondence; control of the incomplete medical record; and processing of the completed record.

**MRE 3949 Cooperative Education in Medical Record Administration (3).** Supervised work in Medical Records taking part in the University Cooperative Education Program. Prerequisite: Admission to Co-op Education.

**MRE 4204 Advanced Coding Procedures (3).** Introduction to coding as it relates to DRG system. Record analysis and data quality addressed. CPT, DSM III and current coding issues and regulations presented and discussed. Prerequisite: MRE 3202.

**MRE 4211 Medical Record Information Systems (3).** Development of medical record information systems and applications for evaluation and management of a medical record department. Emphasis is on computerization. Prerequisite: MRE 3110.

**MRE 4304 Problems in Medical Record Administration (3).** Through illustrative case reports, group discussions, role playing, oral reports, lectures, buzz sessions, and review of the literature; students explore effective methods for identifying and arriving at satisfactory solutions to specific types of problems they may expect to encounter in the administration of medical record services.

**MRE 4344 Medical Record Management II (4).** Application of management principles to M.R. System, including: development of manuals, job descriptions, interviewing and evaluation techniques, forms design, environmental planning etc. External activities assigned. Prerequisites: MRE 3312 or HSA 3180.

**MRE 4400 Health Care Records: Multi-Institutional (3).** Standards and procedures for long-term, ambulatory care, home health, rehabilitation, psychiatric, dental, Hospice and other health care services are investigated and compared.

**MRE 4415 Medical Record Administration III (3).** Quality assessment for health care institutions including risk management and utilization review. JCAHO, AOA, PRO, Medicare and Medicaid requirements emphasized.

**MRE 4831 Directed Practice III (1).** Experience in quality assessment, risk management, and utilization review areas. Clinical experience in acute care and non-acute care facilities.

**MRE 4835 Internship in Medical Record Management (4).** Management experience in a medical record department under the supervision of a Registered Record Administrator. Emphasis on administrative and medical staff relationships.

**MRE 4905 Directed Independent Study (1-3).** Individual conferences, assigned readings, and reports on investigations related to the Medical Record profession.

**MRE 4932 Special Topics (3).** Designed to address topics not otherwise offered in the curriculum but specific to Medical Record Administration. Topics to be announced yearly.

**MRE 4949 Cooperative Education in Medical Record Administration (3).** Supervised work in Medical Records taking part in the University Cooperative Education Program. Prerequisite: MRE 3949.

## Occupational Therapy

**Gail Hills Maguire,** *Associate Professor and Chairperson*
**Reba L. Anderson,** *Associate Professor*
**Susanne D'Agati,** *Assistant Professor*
**Anne Dickerson,** *Assistant Professor*
**Susan Kaplan,** *Associate Professor and Graduate Coordinator*
**Suze Dudley,** *Assistant Professor*
**Patricia Michael,** *Assistant Professor*
**Pamela Shaffner,** *Assistant Professor*

Occupational therapy is a health profession concerned with promoting the quality of life of individuals. Therapeutic techniques are directed toward restoration, reinforcement and enhancement of participation in life. Occupational therapy may be indicated for persons whose life has been interrupted by disease or injury, or those who suffer from developmental delays or problems associated with aging.

The occupational therapist assesses the client's abilities to carry out tasks and activities necessary for productive living. Working collaboratively with the client and considering his/her personal goals, lifestyle and environment, the therapist develops an intervention program designed to help restore the greatest possible functional capacity. During the treatment or rehabilitation process, the client actively engages in a directed program of purposeful, meaningful activities designed to increase his or her level of functioning. The occupational therapist works collaboratively with the client, other health professionals on the health care team, and community agency personnel. Occupational therapists serve a wide variety of individuals in all age ranges and work in settings such as community agencies, sheltered workshops, hospitals, schools, extended care facilities, and rehabilitation centers. There is an increasing demand for occupational therapists and excellent opportunities exist for career advancement.

Qualities that are necessary to be a successful therapist include the ability to work with others, look at the totality of human performance, think creatively, problem solve, and direct the actions of others.

### Bachelor of Science in Occupational Therapy

In order to be admitted to the program in occupational therapy, applicants must meet the requirements for admission to the University, have a cumulative GPA of 2.5 or higher, and have completed required prerequisites and 60 semester hours of acceptable academic credit. Applicants must apply directly to the Office of Admissions. Applicants who are already registered at FIU as degree seeking students should send a letter to the OT department in place of an application stating that they seek admission to the program. First evaluation of completed applications is February 15. Applications received after February 15 will be reviewed as class space permits. Enrollment is limited and one class is selected each academic year to begin Fall semester. The average admitting grade point for admission is 3.0. The program is accredited by the American Occupational Therapy in association with the American Medical Association.

### Lower Division Preparation

#### Required Courses

Biology with lab three semester hours (anatomy/and physiology recommended), physics three semesters, psychology three semester hours. Theories of personality three semester hours. human growth and development (infancy through adolescence) three semester hours. Sociology/anthropology three semester hours. Statistics three semester hours. Introduction to Computer Programming three semester hours.

To be admitted into the program, FIU undergraduates must have met all the lower division requirements including CLAST, completed 60 semester hours, and must be otherwise acceptable to the program.

### Upper Division Program

#### Required Courses

**Junior Year**

**Fall Semester:** (15)

| | | |
|---|---|---|
| OTH 3004 | Professional Development | 3 |
| OTH 3012L | Therapeutic Communication | 2 |
| OTH 3160 | Adaptive Living Skills | 2 |
| OTH 3160L | Adaptive Living Skills Lab | 1 |
| PCB 3702 | Intermediate Human Physiology | 3 |
| ZOO 3731L | Human Anatomy | 3 |
| ZOO 3731 | Human Anatomy Lab | 1 |

**Spring Semester:** (17)

| | | |
|---|---|---|
| OTH 3327 | Issues in Psychosocial Dysfunction for Occupational Therapists | 3 |
| OTH 3351 | Treatment Techniques in Psychiatric OT | 1 |
| OTH 3351L | Treatment Techniques in Psychiatric OT Lab | 2 |
| OTH 3413 | Applied Kinesiology | 3 |
| OTH 3413L | Applied Kinesiology Laboratory | 1 |
| OTH 3520 | Developmental Theory I | 2 |
| OTH 3520L | Developmental Theory I Lab | 1 |
| ZOO 4743 | Neuroscience | 4 |

**Summer Semester:** (5)

| | | |
|---|---|---|
| OTH 3815 | Field Work Experience Level I | 4 |
| OTH 3007 | Medical Terminology | 1 |

**Senior Year**

**Fall Semester:** (15)

| | | |
|---|---|---|
| OTH 4210 | Developmental Theory II | 3 |
| OTH 4315 | Theory and Dysfunction in Psychiatric OT | 2 |
| OTH 4411 | Pathology and Medical-Surgical Disorders | 3 |
| OTH 4421 | Biomechanics in Rehabilitation | 2 |
| OTH 4421L | Biomechanic in Rehabilitation Lab | 1 |
| OTH 4422 | Evaluation and Treatment of Central Nervous System Dysfunction | 3 |
| OTH 4422L | Evaluation and Treatment of Central Nervous System Dysfunction Lab | 1 |

**Spring Semester:** (16)

| | | |
|---|---|---|
| OTH 4112L | Therapeutic Media Lab | 2 |
| OTH 4170L | Therapeutic Techniques in Physical Disabilities | 2 |
| OTH 4325 | Evaluation and Treatment in Psychiatric OT | 2 |
| OTH 4325L | Evaluation and Treatment in Psychiatric OT Lab | 1 |
| OTH 4714 | Treatment Planning and Patient Management in Pediatrics | 3 |
| OTH 4761 | Professional Issues in Occupational Therapy | 2-3 |
| Elective In Clinical Specialization | | 3 |

**Summer Semester:** (12)

| | | |
|---|---|---|
| OTH 4850 or OTH 4851 | Field Work Experience | 12 |

**Fall Semester:** (12)

| | | |
|---|---|---|
| OTH 4850 or OTH 4851 | Field Work Experience | 12 |

### Course Descriptions

#### Definition of Prefixes

OTH - Occupational Therapy.

**OTH 3004 Professional Development (3).** History and theory of the discipline of occupational therapy, includes an introduction to clinical and community practice environments.

**OTH 3007 Medical Terminology (1).** A self-instructional program of medical terminology.

**OTH 3012L Therapeutic Communication (2).** Major focus of this course is on several modes of facilitating communication and opportunities for self-knowledge. Interpersonal Process Recall format is followed.

**OTH 3160 Adaptive Living Skills (2).** Evaluation and adaptation of environments within which typical occupational therapy clients interact; specific limiting factors of general disabilities; variety of techniques and aides which compensate or adapt for loss. Corequisite: OTH 3160L.

**OTH 3160L Adaptive Living Skills Lab (1).** Laboratory to accompany OTH 3160. Corequisite: OTH 3160.

**OTH 3327 Issues in Psychosocial Dysfunction for Occupational Therapists (3).** The analysis and identification of patterns of behavior and functional performance pertinent to occupational therapy practice in psychiatry.

**OTH 3328 Foundations of Psychiatric Occupational Therapy Theory (2).** An overview of past and current theories influencing the practice of occupational therapy in psychiatry.

**OTH 3351 Treatment Techniques in Psychiatric Occupational Therapy (1).** The study of the use of purposeful activity for individual and group treatment in psychiatric occupational therapy. Prerequisite: Theories of Personality. Corequisite: OTH 3106L.

**OTH 3351L Treatment Techniques in Psychiatric Occupational Therapy Lab (2).** The application of the modalities of minor crafts and group processes in psychiatric occupational therapy. Prerequisite: Theories of Personality. Corequisite: OTH 3106.

**OTH 3413 Applied Kinesiology (3) OTH 3413L Applied Kinesiology Lab (1).** A course providing learning experiences to develop skills in palpation, goniometry, manual muscle testing, and motion analysis of normal subjects. Prerequisites: ZOO 3731, ZOO 3731L or equivalents.

**OTH 3520 Developmental Theory I (2).** Occupational therapy evaluation, treatment and management of developmental disabilities from birth through adolescence. Prerequisite: DEP 3000 or equivalent.

**OTH 3520L Developmental Theory I Lab (1).** Laboratory to accompany OTH 3520. Prerequisites: DEP 3000, OTH 3004, PCB 3702, ZOO 3731, ZOO 3731L or equivalents. Corequisite: OTH 3520.

**OTH 3815 Field Work Experience Level I (3).** Pre-clinical experience in an approved training center.

**OTH 4109 Technological Applications in Occupational Therapy (1).** Overview of technological applications in clinical practice with emphasis on adaptations for the physically disabled client. Prerequisite: CDA 2310 or equivalent.

**OTH 4109L Technological Applications in Occupational Therapy (1).** Laboratory experience with various technological applications used in occupational therapy practice. Prerequisite: CDA 2310 or equivalent.

**OTH 4112L Therapeutic Media (2).** The study of the use of age appropriate activities as therapeutic modalities.

**OTH 4170L Therapeutic Techniques in Physical Disabilities (2).** Upper extremity prosthetic and orthotic devices are investigated. Presentation includes the biomechanics, anatomy, materials, and appliances necessary for fabrication, pre-and post-prosthetic and orthotic evaluation, checkout procedures and training methods. Prerequisites: Biology with Lab, Anatomy, OTH 4222, OTH 4422L or equivalents.

**OTH 4210 Developmental Theory II (3).** The application of developmental theory to the occupational therapists' evaluation, treatment and management of adults and the aged.

**OTH 4315 Theory and Dysfunction in Psychiatric Occupational Therapy (2).** Presentation of the major psychiatric occupational therapy theorists as they relate to developmental disorders, as well as disorders related adjustment, role dysfunction and human performance. Prerequisites: Abnormal Psychology, Theories of Personality, or equivalents.

**OTH 4325 Evaluation and Treatment in Psychiatric Occupational Therapy (3).** An in-depth study of the evaluations and treatment techniques currently utilized in psychiatric occupational therapy. Prerequisites: OTH 4315, OTH 3106, OTH 3106L, or equivalents. Corequisite: OTH 4325L.

**OTH 4325L Evaluation and Treatment in Psychiatric Occupational Therapy Lab (2).** Laboratory to accompany OTH 4325. Prerequisites: OTH 4315, OTH 3106L or equivalents. Corequisite: OTH 4325.

**OTH 4411 Pathology and Medical-Surgical Disorders (3).** Brief review of organ systems and primary diseases that affect each system, with specific emphasis on the disabilities that would result from such diseases. Prerequisites: PCB 3702, ZOO 3731, ZOO 3731L, ZOO 4743 or equivalents.

**OTH 4421 Biomechanics in Rehabilitation (2).** The analysis and application of biological and physical principles to the evaluation and treatment of patients with physical disabilities. Prerequisites: Physics, ZOO 3731, ZOO 3731L, PCB 3702, OTH 3413, OTH 3413L or equivalents.

**OTH 4421L Biomechanics in Rehabilitation Lab (1).** Laboratory to accompany OTH 4421. Prerequisites: Physics, ZOO 3731, ZOO 3731L, PCB 3702, OTH 3413, OTH 3413L or equivalents. Corequisite: OTH 4421.

**OTH 4422 Evaluation and Treatment of Central Nervous System Dysfunction (4).** Occupational therapy evaluation and treatment of central nervous system dysfunction for clients of all ages. Prerequisite: PCB 3702, ZOO 4743 or equivalents.

**OTH 4422L Evaluation and Treatment of Central Nervous System Dysfunction Lab (1).** Laboratory to accompany OTH 4422. Prerequisites: PCB 3702, ZOO 4743 or equivalents. Corequisite: OTH 4422.

**OTH 4601 Aging Seminar (3).** Review of current gerontic occupational therapy practice including assessment and treatment. Prerequisite: Senior status or permission of instructor.

**OTH 4714 Treatment Planning and Patient Management (3).** By means of case studies, students will have an opportunity to develop in-depth treatment planning and consider issues in patient management. Prerequisites: OTH 3160, OTH 3160L, OTH 4421, OTH 4422, OTH 4422L. Corequisite: OTH 4170L.

**OTH 4761 Professional Issues in Occupational Therapy (2-3).** Professional issues facing occupational therapists including the role of research, organizational systems, and advocacy. Prerequisites: Statistics, OTH 3004 or equivalents.

**OTH 4804C Service Learning in Health (3).** Combines seminars on interpersonal skills with the design and implementation of a service learning project in the community on a health related issue. Prerequisite: Permission of instructor.

**OTH 4850 Field Work Experience (12).** Three months internship in a clinical setting.

**OTH 4851 Field Work Experience (12).** Three months internship in a clinical setting.

**OTH 4852 Field Work Experience (VAR).** Internship in a specialized treatment area.

**OTH 4904 Independent Study (VAR).** To be arranged with instructor according to the student's specialty.

**OTH 4930 Mental Health Seminar (3).** Course combines literature review and site visits to develop student's capability for critical analysis of occupational therapy program development in mental health. Prerequisite: Senior status or permission of instructor.

**OTH 4931 Work Evaluation Seminar (3).** The measurement and analysis of client abilities and work requirements applicable to the practice of occupational therapy. Prerequisites: Senior status or permission of instructor.

**OTH 4932 Pediatric Seminar (3).** Review of current research in advanced pediatric practice. Coordinated clinical experiences offer opportunities for application of theoretical approaches to evaluation and treatment. Prerequisites: Senior status or permission of instructor.

## Physical Therapy

**Awilda R. Haskins,** *Assistant Professor and Chairperson*
**Burton J. Dunevitz,** *Associate Professor*
**Leonard Elbaum,** *Associate Professor*
**Karen Fisher,** *Instructor*
**Jennifer Lander,** *Assistant Professor*
**Elizabeth Revell,** *Associate Professor*
**Colleen Rose St. Prix,** *Assistant Professor*
**Stanley H. Wilson,** *Assistant Professor*

Physical Therapy is a health profession whose primary purpose is the promotion of optimal human health and function through the application of scientific principles to prevent, identify, assess, correct or alleviate acute or prolonged movement dysfunction. Physical therapists examine, treat and instruct individuals with physical disability, movement dysfunctions, bodily malfunctions, and pain from injury, disease and any other physical or mental conditions. Physical therapists administer, interpret and evaluate tests and measurements of body functions and structures; plan, administer, evaluate, and modify treatment and instruction, including the use of physical measures, activities, and devices for preventive and therapeutic purposes; and provide consultative, educational and other advisory services for the purpose of reducing the incidence and severity of physical disability, movement dysfunction, bodily malfunction and pain.

The Department of Physical Therapy offers two programs: an undergraduate program and a graduate program. The undergraduate program leads to a Bachelor of Science degree and is an entry level program into the profession. The graduate program leads to a Master of Science in Physical Therapy and is designed for physical therapists wishing to pursue an advanced degree.

### Bachelor of Science in Physical Therapy

The undergraduate program is accredited by the Commission on Accreditation in Physical Therapy Education of the American Physical Therapy Association, a specialized accrediting body recognized by the Council on Post-Secondary Accreditation. The emphasis is placed upon a student-centered approach whereby individuals progress through a variety of learning experiences designed to develop their evaluative and applied therapeutic skills in the treatment of musculoskeletal, neurologic, cardiovascular, and pulmonary disorders.

The undergraduate students receive experiential and didactic instruction from clinical physical therapists, physicians, and other medical professionals. Clinical education is conducted in accredited centers throughout the United States.

Graduates of the entry level program are prepared to assume employment in general hospitals, rehabilitation centers, private clinics, home health care facilities, school systems, sports medicine units, and in the self-employed sector.

Students who apply for admission to the undergraduate program must meet the physical therapy prerequisites and the general education requirements of the University. Acceptance must be determined both by the University and the Physical Therapy Department. Enrollment is limited and admission is selective.

*Note:* Students must contact the Physical Therapy Department directly for all applications and information materials before December 15. Deadline for receiving applications is January 15. Classes are selected in April to commence coursework in June.

### Lower Division Preparation

At least 60 semester hours of an acceptable level of college credit work; which includes at least one semester of statistics and the following prerequisite courses: at least one academic year of science coursework (including laboratory) in each of the areas of biology/zoology (Human or Vertebrate Anatomy and Physiology is recommended), chemistry, and physics as well as three courses in psychology or two psychology and one sociology (child development is recommended); a minimal GPA average of 2.75 in the prerequisite courses and a minimal overall GPA of 2.75 by December 31 of the year prior to the anticipated admission, or attainment of an overall GPA of less than 2.75, but with a prerequisite GPA of 3.3 or higher; completion of at least 50 clock hours of work in, observation of, or interviews with personnel in physical therapy clinics. The greater the number of hours of experience and the wider the variety, the better qualified the candidates become.

To be admitted into the program, FIU undergraduates must have met all the lower division requirements including CLAST, completed 60 semester hours, and must be otherwise acceptable into the program.

At least 14 hours of prerequisites must be completed before December 31. All general education and prerequisites must be completed no later than the Spring semester.

### Upper Division Program

**Required Courses**

**Junior Year**

| | | |
|---|---|---|
| **Summer Semester:** (6) | | |
| ZOO 3734 | Gross Anatomy II | 3 |
| ZOO 3734L | Gross Anatomy Lab II | 2 |
| PHT 3001 | Professional Issues in Physical Therapy | 1 |
| **Fall Semester:** (16) | | |
| PHT 3122 | Clinical Kinesiology | 5 |
| PHT 3122L | Clinical Kinesiology Laboratory | 1 |
| PHT 3258 | Basic Procedures | 1 |
| PHT 3258L | Basic Procedures Lab | 1 |
| PHT 3812 | Clinical Practicum I (Optional) | 1 |
| PCB 3703 | Human Physiology I | 3 |

| | | |
|---|---|---|
| ZOO 3733 | Gross Anatomy I | 3 |
| ZOO 3733L | Gross Anatomy Lab I | 2 |

**Spring Semester:** (16)

| | | |
|---|---|---|
| PHT 3133 | Musculoskeletal Evaluation | 1 |
| PHT 3133L | Musculoskeletal Evaluation Lab | 1 |
| PHT 3141 | Evaluation Through the Life Cycles | 2 |
| PHT 3141 | Evaluation Through the Life Cycles Lab | 1 |
| PHT 3222 | Therapeutic Exercise | 1 |
| PHT 3222L | Therapeutic Exercise Lab | 2 |
| PHT 3150 | Physical Therapy and Fitness | 1 |
| PHT 3310 | Orthopedics | 4 |
| PCB 3704 | Human Physiology II | 3 |

**Summer Semester:** (12-15)

| | | |
|---|---|---|
| PHT 3216 | Treatment of Pain | 3 |
| PHT 3216L | Electrotherapy Lab | 1 |
| PHT 3134 | Problem Solving in Musculoskeletal Disorders | 1 |
| PHT 3400 | Emotional Aspects of Physical Disability | 2 |
| PHT 3813 | Sections L1 and L2 Junior Clinical Internship | 5 |
| PHT 4905 | Independent Study (optional) | 1-3 |

**Senior Year**

**Fall Semester:** (16)

| | | |
|---|---|---|
| PHT 4160 | Structural and Functional Aspects of Neurology | 4 |
| PHT 4710 | Rehabilitation | 1 |
| PHT 4710L | Rehabilitation Lab | 2 |
| PHT 4234 | Neurorehabilitation | 2 |
| PHT 4234L | Neurorehabilitation Lab | 2 |
| PHT 4300 | Physical Therapy and Human Disorders | 3 |
| PHT 4600 | Research Seminar | 1 |
| PHT 4814 | Clinical Practicum II | 1 |

**Spring Semester:** (18)

| | | |
|---|---|---|
| PHT 4233 | Neurohabilitation | 2 |
| PHT 4233L | Neurohabilitation Lab | 1 |
| PHT 4313 | Clinical Neurology | 4 |
| PHT 4510 | Organization and Administration | 3 |
| PHT 4601 | Independent Research | 2 |
| PHT 4936 | Current Topics | 3 |
| Humanities Elective | | 3 |

**Summer Semester:** (15-18)

| | | |
|---|---|---|
| PHT 4826 | Senior Clinical Internship | 5 |
| PHT 4827 | Senior Clinical Internship II | 5 |

**Fall Semester:** (8)

| | | |
|---|---|---|
| PHT 4828 | Senior Clinical Internship III | 8 |

## Course Descriptions

### Definition of Prefixes

PCB and ZOO - Biological Sciences; PHT - Physical Therapy

**PHT 3001 Professional Issues in Physical Therapy (1).** A survey of practice, legal and ethical issues affecting the current status and future direction of the profession of physical therapy.

**PHT 3122 Clinical Kinesiology (5).** A study of the anatomical, physiological, and biomechanical principles as related to the analysis of motion of the normal human body, with direct correlation to the clinical situation.

**PHT 3122L Clinical Kinesiology Lab (1).** Laboratory experiences in identifying and palpating the various components of the human musculoskeletal system while the body is at rest and in motion.

**PHT 3133 Musculoskeletal Evaluation (1).** Theory and fundamentals of goniometry, joint mobilization, muscle testing, x-ray identification, and posture and gait evaluation.

**PHT 3133L Musculoskeletal Evaluation Lab (1).** Laboratory practice in applied goniometry, joint mobilization, muscle testing, x-ray identification and posture and gait evaluation.

**PHT 3141 Evaluation Through the Life Cycles (2).** A study of the neuromuscular systems through the life cycles; includes evaluation methods; a prerequisite to PHT 4233.

**PHT 3141L Evaluation Through the Life Cycles Lab (1).** Laboratory and field experiences will be utilized for practice of evaluation techniques. Corequisite: PHT 3141.

**PHT 3150 Physical Therapy and Fitness (1).** Lecture and laboratory experiences provide knowledge and skills in the development of physical therapy programs for people who seek optimal movement function. Focus on sports and fitness programs. Corequisite: PCB 3704.

**PHT 3222 Therapeutic Exercise (1).** The principles and rationale for basic therapeutic exercise procedures are presented in lecture format.

**PHT 3222L Therapeutic Exercise Lab (2).** Laboratory experiences provide practice and evaluation in techniques of applying the principles of therapeutic exercise. Corequisite: PHT 3222.

**PHT 3134 Problem Solving in Musculoskeletal Disorders (1).** A seminar class wherein students are assigned a clinical orthopedic problem and evaluate, goal set, treatment plan and role play the treatment application. Prerequisites: PHT 3133, 3133L, 3310, 3222, 3222L.

**PHT 3216 Treatment of Pain (3).** Application of current theories of the causes and management of acute and chronic pain to the use of electrotherapeutic modalities in physical therapy. Corequisite: PHT 3216L.

**PHT 3216L Electrotherapy Lab. (1).** Laboratory experience to develop competency with electrotherapeutic modalities in the treatment of pain. Includes low volt and high volt current, TENS, ultrasound, diathermy, iontophoresis, biofeedback. Corequisite: PHT 3216.

**PHT 3258 Basic Procedures (1).** A lecture format is used to study the scientific rationale for basic physical therapy procedures including vital signs measurement, massage, and superficial heat.

**PHT 3258L Procedures Lab (1).** Laboratory experience and evaluation of skills in basic physical therapy procedures including vital signs measurement, massage, and superficial heat. Corequisite: PHT 3258.

**PHT 3310 Orthopedics (4).** Multimedia lectures and patient case studies presented on the evaluation and management (surgical and non-surgical) of the orthopedic patient, correlated with laboratory practice in evaluative and treatment skills.

**PHT 3400 Emotional Aspects of Physical Disability (2).** Examines attitudes of physical therapists toward disability, emotional reactions of patients to their own disability, and emotional disorders commonly seen in patients treated by physical therapists.

**PHT 3812 Clinical Practicum I (1).** A one day a week observation experience for physical therapy majors designed to orient the student to physical therapy clinical practice. Prerequisite: Junior standing in the PT program.

**PHT 3813 Clinical Internship (5).** Supervised full-time clinical experience, designed to offer the student experience in patient care, particularly musculoskeletal evaluation, application of basic physical techniques, and orthopedic planning and implementation.

**PHT 4160 Structural and Functional Aspects of Neurology (4).** Study of the structure and functions of those components of the central and peripheral nervous systems as they govern normalcy

and evidence pathology. Prerequisites: ZOO 3733, ZOO 3733L, ZOO 3734, and ZOO 3734L.

**PHT 4233 Neurohabilitation (2).** Application of various exercise techniques to the treatment of individuals with neurodevelopmental deficits.

**PHT 4233L Neurohabilitation Lab (1).** Laboratory and field experiences will be utilized for practice of neurohabilitation techniques. Corequisite: PHT 4233.

**PHT 4234 Neurorehabilitation (2).** A lecture/discussion format is used to study various neurophysiological theories and principles which are applied in rehabilitation.

**PHT 4234L Neurorehabilitation Lab (2).** Laboratory experiences in application of the neurorehabilitation lecture material from PHT 4234. Corequisite: PHT 4234.

**PHT 4300 Physical Therapy and Human Disorders (3).** Study of systemic and organ-specific disease and the related medical terminology as they relate to the practice of physical therapy; explores the current literature in selected disease topics.

**PHT 4313 Clinical Neurology (4).** Emphasizes evaluation differential diagnosis, goal setting, and treatment planning for patients with neurologic disability. Presented by neurologists and by physical therapists who provide clinical experience in neurologic evaluation.

**PHT 4510 Organization and Administration (3).** A study in the management of physical therapy delivery systems and current health trends affecting the profession.

**PHT 4600 Independent Research in Physical Therapy (1).** This course will provide physical therapy students with the background of didactic information necessary for them to complete a research project in PHT 4601.

**PHT 4601 Physical Therapy Research Seminar (2).** To allow students to collect data, analyze results, and submit findings in accepted written style; includes oral presentations to an audience of health professionals.

**PHT 4710 Rehabilitation (1).** Explores functional evaluation, goal setting, and treatment planning for severely debilitated patients with medical, cardiac, pulmonary, thermal and spinal-cord-related disabilities. Other health disciplines participate in some presentations.

**PHT 4710L Rehabilitation Lab (2).** Laboratory practice in submaximal cardiac stress testing, chest physical therapy, splinting, ADL training, wheelchair fitting, and treatment of patients with spinal cord injuries. Corequisite: PHT 4710.

**PHT 4814 Clinical Practicum II (1).** A one day a week experience for senior physical therapy majors; designed to enable the student to maintain clinical skills through clinical practice. Prerequisites: PHT 3813 and senior standing in the PT program.

**PHT 4826 Senior Clinical Internship (5).** Supervised full-time clinical experience, designed to afford the student the opportunity to practice total patient care, as well as administration and supervision in physical therapy.

**PHT 4827 Senior Clinical Internship II (5).** Continuation of PHT 4826. Corequisite: PHT 4826.

**PHT 4828 Senior Clinical Internship III (8).** Continuation of PHT 4826 and PHT 4827. Pre- or Corequisite: PHT 4826.

**PHT 4905 Independent Study (1-3).** The student will select a particular aspect of physical therapy or closely related subject for in-depth independent study with a faculty preceptor.

**PHT 4936 Current Topics in Physical Therapy (1-3).** Study of a current topic or limited number of topics not otherwise presented in the curriculum. May be repeated with different subject content. Prerequisite: Senior standing.

## Prosthetics and Orthotics

**Ronald W. Spiers,** *Associate Professor and Chairperson*

**David W. Bilby,** *Instructor*

**Geza F. Kogler,** *Instructor*

Prosthetics and Orthotics are health professions concerned with rehabilitating patients with disabling conditions. Prosthetics is the science of designing and fitting a replacement for an absent limb or limb-segment, and orthotics is the science of designing and fitting a supportive or corrective device for an affected or abnormal functioning existing body segment. At the request of and in consultation with the physician, the prosthetist/orthotist assists in the formulation of prescription for the prosthesis/orthosis, and evaluates the patients' needs in relation to their particular condition, disease entity, and functional loss.

Prosthetics/orthotics basically requires a mechanical system be designed and fitted to a physiological system, such that the added mechanical device replaces a lost limb or supports or corrects an existing body segment abnormality. This illegal marriage of mechanical and physiological systems is reflected directly within the content of the course of study; the emphasis being placed on anatomy, physiology, pathology, kinesiology, biomechanics, and mechanical engineering. Concurrently with these topics prosthetics/orthotics science is also taught. Functioning in the clinical setting as an active member of a health care team, the prosthetist/orthotist collaborates with other health care professionals in the rehabilitation of patients with chronic, disabling illnesses and injuries or birth defects. Qualities that are necessary to be a successful prosthetist/orthotist include the ability to work with others, look at the totality of human performance, think creatively, problem-solve, and direct the actions of others.

To be admitted to the program in prosthetics/orthotics, applicants must meet the requirements for admission to the University, have a cumulative GPA of 2.6 or higher, have completed the required prerequisites, lower division requirements including CLAST, and 60 semester hours of acceptable academic credit. Applicants must apply both to the University and to the prosthetic/orthotic department. Enrollment is limited and one class is selected each academic year to begin Fall semester.

### Bachelor of Science in Prosthetics and Orthotics

#### Lower Division Program

**Required Courses**

1. Biological or physical sciences, or both, six semester hours to include three semester hours of Biology with lab. Recommended Courses: Anatomy with Lab; Human Anatomy and Physiology with Lab.

2. Mathematics - six semester hours. Recommended courses: Trigonometry; Calculus with Analytic Geometry; Analytic Geometry.

3. Physics - six semester hours. Recommended courses: Physics with Lab, Mechanics.

4. Psychology - three semester hours. Human Growth and Development; Human Relations, Introduction to Psychology.

## Upper Division Program

**Required Courses**

**First Year**

**Fall Semester:** (16 )

| | | |
|---|---|---|
| ZOO 3731 | Human Anatomy | 3 |
| ZOO 3731L | Human Anatomy Lab | 1 |
| EGN 3365 | Materials in Engineering | 3 |
| OTH 4411 | Pathology and Medical Surgical Disorders | 3 |
| PRO 3000 | Prosthetic and Orthotic Techniques | 4 |
| Electives | | 2 |

**Spring Semester:** (16)

| | | |
|---|---|---|
| OTH 3413 | Applied Kinesiology | 2 |
| OTH 3413L | Applied Kinesiology Lab | 1 |
| PRO 3300 | Below Knee Prosthetics | 3 |
| PRO 3300L | Below Knee Prosthetics Lab | 3 |
| PRO 3310 | Lower Limb Orthotics I | 2 |
| PRO 3320 | Lower Limb Orthotics II | 2 |
| PRO 3310L | Lower Limb Orthotics Lab | 3 |

**Summer Semester:** (6)

| | | |
|---|---|---|
| OTH 3007 | Medical Terminology | 1 |
| PHT 3310C | Orthopedics | 2 |
| PRO 3800 | Field Work Experience Level I | 3 |

**Second Year**

**Fall Semester:** (17)

| | | |
|---|---|---|
| ETM 3510 | Mechanical Design I | 3 |
| PCB 3702 | Intermediate Human Physiology | 3 |
| PRO 4330 | Above Knee Prosthetics I | 2 |
| PRO 4340 | Above Knee Prosthetics II | 2 |
| PRO 4330L | Above Knee Prosthetics Lab | 3 |
| PRO 4350 | Spinal Orthotics | 2 |
| PRO 4350L | Spinal Orthotics Lab | 2 |

**Spring Semester:** (16)

| | | |
|---|---|---|
| MAN 4802 | Small Business Management | 3 |
| DEP 3402 | Psychology of Adulthood | 3 |
| PRO 4360 | Upper Limb Prosthetics | 3 |
| PRO 4360L | Upper Limb Prosthetics Lab | 2 |
| PRO 4370 | Upper Limb Orthotics | 3 |
| PRO 4370L | Upper Limb Orthotics Lab | 2 |

**Summer Semester:** (8)

| | | |
|---|---|---|
| PRO 4850 | Clinical Internship: Supervised Setting - 13 week placement | 8 |

## Course Descriptions

**Definition of Prefixes**

PRO-Prosthetics/Orthotics

**PRO 3000 Introduction to Prosthetics and Orthotics (4).** Lecture and demonstrations to introduce the student to prosthetic orthotic and biomechanical principles utilized during the clinical rehabilitation process. Prerequisites: Admission to program or permission of instructor, or both.

**PRO 3300 Below Knee Prosthetics (3).** Techniques of evaluation and design for all types of below knee amputations as well as instruction in fitting the amputee. Prerequisite: PRO 3000. Corequisite: PRO 3300L.

**PRO 3300L Below Knee Prosthetic Laboratory (3).** Observation and supervised application of below knee amputee assessment, device recommendation, and fabrication techniques. Prerequisite: PRO 3000. Corequisite: PRO 3300.

**PRO 3310 Lower Limb Orthotics I (2).** Focus is on the management of adult and juvenile patients with ankle/foot disabilities. Prerequisite: PRO 3000. Corequisites: PRO 3320, PRO 3310L.

**PRO 3310L Lower Limb Orthotics Laboratory (3).** Laboratory sessions focus on the orthotic management of juvenile and adult patients with lower limb disabilities. Prerequisite: PRO 3000. Corequisites: PRO 3310, PRO 3320.

**PRO 3320 Lower Limb Orthotics II (3).** Focus is on the orthotic management of adult and juvenile patients with conditions affecting hip and knee. Prerequisite: PRO 3000. Corequisites: PRO 3310, PRO 3310L.

**PRO 3800 Field Work Experience (3).** Clinical experience in an approved prosthetic or orthotic center, or both. Prerequisite: PRO 3000, PRO 3310L.

**PRO 4330 Above Knee Prosthetics I (2).** Principles of fabrication, fit, dynamic alignment, techniques of evaluation, and education for suction suspended prostheses. Prerequisite: PRO 3300, PRO 3300L. Corequisites: PRO 4300L, PRO 4340.

**PRO 4330L Above Knee Prosthetics Laboratory (3).** Observation and supervised application of prosthetics for above knee amputee patients; assessment, device recommendation, and fabrication techniques. Prerequisites: PRO 3300, PRO 3300L. Corequisites: PRO 4330, PRO 4340.

**PRO 4340 Above Knee Prosthetics II (2).** Principles of fabrication, fit, dynamic alignment, techniques of evaluation and education for conventional non-suction prostheses. Prerequisites: PRO 3300, PRO 3300L. Corequisites: PRO 4330L, PRO 4330.

**PRO 4350 Spinal Orthotics (2).** Spinal and pelvic biomechanics and pathomechanics, components and techniques for fabrication of spinal orthosis. Prerequisite: PRO 3000. Corequisite: PRO 4350L.

**PRO 4350L Spinal Orthotic Laboratory (2).** Application of principles and techniques presented in PRO 4350 to the construction of spinal orthosis. Prerequisite: PRO 3000. Corequisite: PRO 4350.

**PRO 4360 Upper Limb Prosthetics (3).** Principles and techniques of prosthetic evaluation and design for all levels of upper extremity amputees. Prerequisite: PRO 3000. Corequisite: PRO 4360L.

**PRO 4360L Upper Limb Prosthetics Laboratory (2).** Client assessment, device recommendation, and fabrication of upper limb prosthetic devices. Prerequisite: PRO 3000. Corequisite: PRO 4360.

**PRO 4370 Upper Limb Orthotics (3).** Biomechanics and pathomechanics as applied to upper extremity orthotic components and materials. Prerequisite: PRO 3000. Corequisite: PRO 4370L.

**PRO 4370L Upper Limb Orthotics (2).** Application techniques and procedures described for upper limb orthotics, including evaluation of physical and functional deficits, measurement, fabrication, fitting and evaluation of devices. Prerequisite: PRO 3000. Corequisite: PRO 4370.

**PRO 4850 Clinical Internship (8).** Directed clinical experience in an approved prosthetic or orthotic center, or both. Prerequisite: Satisfactory completion of previous didactic courses or consent of instructor.

## Certificates

### Occupational Therapy Certificate

The certificate program can only be taken concurrently with the Master of Science in Occupational Therapy. It is designed for the student who already holds a Bachelor's degree in a field

other than occupational therapy. Students admitted to this program will apply to the occupational therapy department as graduate students.

The certificate curriculum will enable students to qualify for certification by the American Occupational Therapy Certification Board. Graduate students who hold a bachelor's degree in a field other than occupational therapy must complete this program.

**Prerequisites**

Statistics, abnormal psychology, theories of personality, human growth and development, biology, biology lab, human anatomy[1], human psysiology[1], neuroscience[1], and medical terminology.

[1]These courses must be a the junior level or above. If not taken as prerequisite, they may be taken after admission to the certificate program.

**Required Courses:** (64)

| | | |
|---|---|---|
| OTH 3351 | Treatment Techniques in Psychiatric O.T. | 1 |
| OTH 3351L | Treatment Techniques in Psychiatric O.T. | 2 |
| OTH 3413 | Applied Kinesiology | 3 |
| OTH 3413L | Applied Kinesiology Lab | 1 |
| OTH 3520 | Developmental Theory I Lab | 2 |
| OTH 3520L | Developmental Theory I Lab | 1 |
| OTH 4170L | Therapeutic Techniques | 2 |
| OTH 4210 | Developmental Theory II | 3 |
| OTH 4315 | Theory & Dysfunction in Psychiatric O.T. | 2 |
| OTH 4325 | Evaluation & Treatment in Psychiatric Occupational Therapy | 2 |
| OTH 4325L | Evaluation & Treatment in Psychiatric Occupational Therapy Lab | 1 |
| OTH 4411 | Pathology & Medical Surgical Disorders | 3 |
| OTH 4421 | Biomechanics | 2 |
| OTH 4421L | Biomechanics Lab | 2 |
| OTH 4422 | Evaluation & Treatment of Central Nervous Systems Dysfunction & Lab | 4 |
| OTH 4422L | Evaluation & Treatment of Central Nervous Systems Dysfunction & Lab | 1 |
| OTH 4761 | Professional Issues | 2 |
| OTH 4851 | Fieldwork Level II (Pyschosocial Dysfunction) | 12 |
| OTH 4850 | Fieldwork Level II (Physical Disabilities) | 12 |
| OTH 5162 | Adaption of Human Occupation | 3 |
| OTH 5011 | Theories & Practice of O.T. | 3 |
| OTH 5760 | Current Research in O.T. | 3 |

## Medical Record Coding Certificate

The purpose of the certificate is to offer an ICD-9-CM Coding program for health care personnel within the community. Study shall include basic concepts of terminology, disease processes, and patient classification systems with major emphasis on ICD-9-CM. CPT is included also.

**Required Courses**

Prerequisites: Anatomy and Physiology with Laboratory

| | | |
|---|---|---|
| HSC 3531 | Medical Terminology | 3 |
| MRE 3202 | Basic Coding Procedures | 3 |
| MRE 3401 | Fundamentals of Medical Science I | 3 |
| MRE 4204 | Advanced Coding | 3 |
| MRE 3402 | Fundamentals of Medical Science II | 3 |

Students must complete their program of study within three years from the date of admission to the certificate program and receive a 'C' or higher in each course.

## College of Health

*Dean* **William J. Keppler**
*Associate Dean* **Sylvia Smith**
*Chairpersons and Directors:*
Dietetics and Nutrition **Katharine R. Curry**
*Medical Laboratory Sciences* **Janet A. Lineback**
*Medical Record Administration* **Elizabeth M. Johnson**
*Occupational Therapy* **Gail H. Maguire**
*Physical Therapy* **Awilda R. Haskins**
*Prosthetics and Orthotics* **Ronald W. Spiers**
*Public Health* **Joseph Patterson**

### Faculty

**Anderson, Barbara V., M.S., M.T. (ASCP), S.B.B.,** *(Ohio State University), Assistant Professor, Medical Laboratory Sciences*

**Anderson, Reba L., Ph.D., O.T.R./L., F.A.O.T.A.,** *(University of Florida), Associate Professor, Occupational Therapy*

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**Curry, Katharine R., Ph.D., R.D., L.D.,** *(Southern Illinois University), Professor, Chairperson Dietetics and Nutrition*

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**Warden, Beverly A., Ph.D., MT** *(ASCP), (Northeastern University) Assistant Professor, Medical Laboratory Sciences*

**Wellman, Nancy S., Ph.D., R.D.** *(University of Miami), Associate Professor, Dietetics and Nutrition*

**Wilson, Stanley H., M.S., P.T.** *(St. Thomas of Villanova University), Assistant Professor, Physical Therapy*

# School of Hospitality Management

**Anthony G. Marshall**, *Dean and Professor*
**Rocco M. Angelo**, *Associate Dean and Associate Professor*
**Lee C. Dickson**, *Assistant Dean and Associate Professor*
**Elio Bellucci**, *Associate Professor*
**M. Chase Burritt**, *Visiting Assistant Professor*
**Patrick J. Cassidy**, *Lecturer*
**Percival Darby**, *Assistant Professor*
**Patricia Deveau**, *Assistant Professor*
**Peter Goffe**, *Associate Professor*
**Joseph B. Gregg**, *Associate Professor*
**David Grier**, *Instructor*
**Fritz G. Hagenmeyer**, *Associate Professor*
**Albert J. Haleblian**, *Associate Professor*
**William M. Hansen**, *Adjunct Lecturer*
**William Hebrank**, *Adjunct Lecturer*
**Michael E. Hurst**, *Professor*
**Richard A. Huse**, *Associate Professor*
**Charles L. Ilvento**, *Associate Professor*
**Lendal Kotschevar**, *Professor*
**Steven V. Moll**, *Associate Professor*
**Elisa Moncarz**, *Associate Professor*
**Michael J. Moran**, *Lecturer*
**William J. Morgan, Jr.**, *Professor*
**William O'Brien**, *Associate Professor*
**Alan J. Parker**, *Professor*
**Barry L. Perl**, *Adjunct Lecturer*
**Nestor Portocarrero**, *Associate Professor*
**Roger Probst**, *Lecturer*
**Joan S. Remington**, *Visiting Adjunct Lecturer*
**Norman H. Ringstrom**, *Professor*
**Kevin Robson**, *Associate Professor*
**William Stanford**, *Lecturer*
**David M. Talty**, *Visiting Assistant Professor*
**Mary L. Tanke**, *Associate Professor*
**Andrew N. Vladimir**, *Assistant Professor*
**Mickey Warner**, *Associate Professor*
**Theodore White**, *Lecturer*

The School of Hospitality Management offers Bachelor's and Master's programs that combine practical experience with classroom theory to assist the student to gain the understanding, skills, and techniques needed to qualify for job opportunities, or to achieve his or her career goals in the hospitality industry.

With the cooperation of industry executives, the School has created an internship program which literally utilizes the hotels, motels, restaurants, clubs, airlines, travel agencies, and cruise lines as practice labs for students. The advanced phase of the internship program provides each student a structured and closely supervised management experience normally not available to a student until he or she has entered the industry after graduation.

An Industry Advisory Board - which includes outstanding executives in the hotel, food and travel industries - works regularly with the faculty, staff, and students of the School to formulate and update a curriculum that is current, flexible, and related to the needs of the hospitality industry.

The School has been designated a Program of Distinction by the Board of Regents.

*Note*: The programs, policies, requirements, and regulations listed in this catalog are continually subject to review, in order to serve the needs of the University's various publics, and to respond to the mandates of the Florida Board of Regents and the Florida Legislature. Changes may be made without advance notice. Please refer to the General Information section for the University's policies, requirements, and regulations.

## Admission

Applicants to the School must submit an Application for Admission to the University and must follow the regular University procedures. Applicants must be eligible for admission to the University before admission to the School.

### Undergraduate

Any student who has completed two years of college (60 semester hours) may apply for admission. Full credit will be granted both Associate in Arts and Associate in Science degrees. One may enroll on either a full-time or a part-time basis.

It is not necessary to have been previously enrolled in a hotel or restaurant program. The curriculum will provide the specialized professional education to equip the student for a career in hospitality management. Students with training in liberal arts, business, education, or technology, for example, are qualified to enroll in the program.

### Non-Degree Seeking Students

A number of persons currently employed in the hospitality field may not have the educational requirements to meet degree admission standards, but may be interested in enrolling in certain specific courses to improve their skills and to enhance their chances for promotion. Any person currently employed in the field may register as a Non-Degree Seeking Student for a total of 15 semester hours.

## Certificate Program

The School has Certificate Programs in Hotel Management, Restaurant Management, and Travel and Tourism Management. Each program has a core requirement and electives to meet the specific needs of each candidate.

The programs are open to all students with a high school education and experience in the industry. The international student candidate must submit a satisfactory score on the TOEFL exam or its equivalent and a Certificate of Finances document.

## Undergraduate Study

The School operates on a single major concept with a core of 48 semester credits required of all students and an additional 15 semester credits of hospitality management electives. Under this system, the student enjoys maximum flexibility in choosing areas of emphasis while being assured of a comprehensive coverage of all areas of hospitality management.

A maximum of 60 semester credits may be transferred from a junior or community college program. More credits may be transferred from a related program at a four-year institution.

There is a requirement that all students work at least 800 hours in the Hospitality Industry, in addition to the Advanced Internship.

## Locations

The School is located on two campuses:

The North Miami Campus located at Biscayne Boulevard (U.S.1) and Northeast 151 Street, North Miami, Florida.

Broward Center located in Fort Lauderdale, at 3501 Southwest Davie Road, on the Central Campus of Broward Community College.

## Bachelor of Science in Hospitality Management

### Lower Division Preparation

To qualify for admission to the program, FIU undergraduates must have met all the lower division requirements including CLAST, completed 60 semester hours, and must be otherwise acceptable into the program. Transfer students should complete a minimum of 60 semester hours including general education requirements. General education requirements must be completed prior to graduation from the University.

Principles of Accounting I and II are prerequisites for taking course work in the accounting and finance areas. The student who has not taken these prerequisites will be required to take HFT 3403

during his or her first semester at the University.

**Course Requirements:** (63 semester hours)

**Management, Accounting, Finance, and Information Systems:** (12 semester hours)

| | | |
|---|---|---|
| HFT 3423 | Hospitality Information Systems | 3 |
| HFT 3453 | Hospitality Industry Management | 3 |
| HFT 4464 | Interpretation of Hospitality Financial Statements | 3 |
| HFT 4474 | Profit Planning and Decision Making in the Hospitality Industry | 3 |

**Food and Beverage Management:** (15 semester hours)

| | | |
|---|---|---|
| FSS 3221 | Introduction to Commercial Food Production | 3 |
| FSS 3232 | Intermediate Quantity Food Production | 3 |
| FSS 3234 | Volume Feeding Management | 3 |
| FSS 3243 | Basic Meat Science | 3 |
| HFT 3263 | Restaurant Management | 3 |

**Administration:** (21 semester hours)

| | | |
|---|---|---|
| HFT 3323 | Physical Plant Management | 3 |
| HFT 3503 | Marketing Strategy - Phase I | 3 |
| HFT 3514 | Marketing Strategy - Phase II | 3 |
| HFT 3603 | Law as Related to the Hospitality Industry | 3 |
| HFT 3700 | Fundamentals of Tourism | 3 |
| HFT 3945 | Advanced Internship | 3 |
| HFT 4234 | Union Management Relations | 3 |
| Electives | | 15 |

## Course Descriptions

### Definition of Prefixes and Suffixes

FOS - Food Science; FSS - Food Service Systems; HFT - Hotel, Food, Tourism;

F-Fall semester offering; S-Spring semester offering; SS- Summer semester offering.

**FOS 4201 Sanitation in Food Service Operation (3).** The causes and prevention of food poisoning are stressed. Emphasis is placed on the current problems confronting the industry, with recent food developments as they relate to sanitation. Curriculum developed by the National Sanitation Foundation is included. (F)

**FSS 3221 Introductory Commercial Food Service Production (3).** Provides an introduction to commercial food preparation, nutrition, standard product identification, storage, and supervisory techniques in the area of food preparation. Course includes classroom instruction, demonstrations, and actual cooking experience. (F,S,SS)

**FSS 3232 Intermediate Quantity Food Production Techniques (3).** An advanced commercial food production course which provides the student with the opportunity to achieve competence and to develop techniques in the garnishing, pastry, serving, and convenience food areas. Prerequisite: FSS 3221 or equivalent. (F,S,SS)

**FSS 3234 Volume Feeding Management (3).** The facilities of various types of large quantity food operations are utilized to provide the student with both production and managerial experience. Students will be rotated through production stations and, as managers, will be required to plan menus, supervise preparation and service, handle customer relations, and keep accurate accounting records on the profit and loss phases of the operation. Staffing, merchandising, and cost control procedures are integral parts of the course. Prerequisites: FSS 3221 and FSS 3232. (F,S,SS)

**FSS 3241 Classical Cuisine (3).** Provides an opportunity for students skilled in cookery to expand their knowledge of food preparation into the area of world-respected traditional dishes. The course includes lecture, demonstration, and actual preparation of classical dishes. The students will utilize conventional methods of preparation as well as convenience foods. Prerequisites: FSS 3221, FSS 3232, and FSS 3234.

**FSS 3243 Basic Meat Science (3).** Fundamentals of meat: quality yield, utilization of cuts, availability, costing, buying, inventorying, packaging, labor, and trends.

**FSS 4105 Purchasing and Menu Planning (3).** Basic information on sources, grades and standards, criteria for selection, purchasing, and storage for the major foods, including the development of specifications. Consideration of the menu pattern with particular emphasis on costing, pricing, and the work load placed on the production staff. Item analysis and merchandising features are emphasized. (S)

**FSS 4245 Advanced Meat Science (3).** An advanced course which considers the variable factors of meat, poultry, and fish utilization. Emphasis is placed upon newer techniques in purchasing, maximizing yields, and providing products in unique form. The use of TVP and other analogues is considered, as are the functions of the specialized commissary-type of meat processing plants. Guest speakers will be utilized, and field trips to protein processing plants will be made to emphasize major points. Prerequisite: FSS 3243. (F,S)

**FSS 4431 Food Facility Layout and Design (3).** Defines and explains concepts, principles, and procedures in evaluating and/or developing varied commercial food service facilities that will increase profit by reducing investment and operating cost and/or by increasing capacity. Actual installations are intensively reviewed. Current trends in food service methodology and technology are studied in detail, and food service equipment manufacturing processes and distribution economics are observed and evaluated. (F,S)

**FSS 4614 Food and Beverage Merchandising (3).** This is an application of marketing and advertising principles to the specific area of food and beverage for hotels and restaurants. (F,S)

**HFT 3000 Introduction to Hospitality Management (3).** A survey course providing an overview of the industry: its history, problems, and general operating procedures. Operating executives from the fields of hotel, restaurant, food service, travel, and tourism will be featured periodically. (F,S)

**HFT 3203 Fundamentals of Management in the Hospitality Industry (3).** A basic course in general management to acquaint the student with theories and principles of organization, the tools of managerial decision-making, and the management process, with particular reference to the hospitality industry. (F,S,SS)

**HFT 3263 Restaurant Management (3).** An analysis of the principal operating problems in the restaurant field. Procedures, approaches, and techniques of management are explored and developed as they relate to the various categories of restaurants ranging from fast food to gourmet. Industry leaders will present successful concepts of restaurant operation. (F,S)

**HFT 3313 Hospitality Property Management (3).** The problems of cost and operation of pest control, security, parking, general cleaning and upkeep, laundry, fire prevention, pools, tennis courts, and care of guest rooms and public space, with emphasis on equipment,

personnel, and modern innovations. (F,S,SS)

**HFT 3323 Physical Plant Management (3).** A comprehensive survey of engineering, maintenance and efficiency control in hotels, restaurants, and institutions. (F,S,SS)

**HFT 3343 Hotel and Restaurant Planning and Design (3).** Considers analysis, evaluation, and scheduling of the economic, technical, aesthetic, and merchandising factors involved in the planning, programming and design stages of hotels and restaurants. Actual hotel and restaurant projects will serve as the basis for discussion and student project work.

**HFT 3344 Fast Food Systems Management (3).** A study of management systems in a wide range of fast food restaurants, including site criteria, design and layout, operations, marketing techniques and cost controls. (F)

**HFT 3403 Introduction to Management Accounting for the Hospitality Industry (3).** Introduction and practice in accounting processes, and the principles of hospitality management accounting. Prepares the student for work in advanced accounting and financial management. Required for students who have not completed an introductory accounting course. (F,S,SS)

**HFT 3423 Introduction to Hospitality Information Systems (3).** An introduction to the general concepts and equipment that support information management by computer within the Hospitality Industry. Data field handling and other information management techniques are stressed. Students are first required to write application programs, then to complete a series of assignments utilizing application programs relating to guest cycle management on the school's computerized property management system. (F,S,SS)

**HFT 3434 Club Operations Management (3).** Lecture, discussion, case studies, and field trips specifically designed to expose the future club manager, golf professional, and turf manager to club operations. Introduction to the uniform system of accounts for clubs, annual club studies for operating results, control systems, taxation, budgeting, and management reports. (F,S,SS)

**HFT 3453 Operations Control (3).** Study of the management tools available to control sales and expenses within hospitality operations. Detailed analysis of the responsibility centers using a cost managing approach. Case problems provide the students the opportunity to develop control systems for food and lodging organizations. Prerequisite: HFT 3403 (F,S,SS)

**HFT 3454 Food and Beverage Cost Control (3).** Fundamentals of food and beverage cost controls for hotel and restaurant operations. (F,S,SS)

**HFT 3503 Marketing Strategy Phase I (3).** Application of marketing principles to business operations within the hospitality industry, with particular emphasis on viewing marketing as a competitive strategy in domestic and international markets. (F,S,SS)

**HFT 3505 Hospitality Buyer Behavior (3).** An analysis of influences on buyer and the process involved in their purchase of hospitality services and the implications for marketing-strategy design and execution. Prerequisite: HFT 3503 or equivalent. (S,SS)

**HFT 3514 Marketing Strategy Phase II (3).** Consideration of all aspects of the advertising element of the promotion mix to execute the corporation's or tourist destination's marketing strategy. Prerequisite: HFT 3503. (F,S,SS)

**HFT 3524 Sales Management for the Hospitality Industry (3).** The course focuses on organizing sales and servicing effort and executing marketing strategy by developing sales strategies, plans and tactics for hospitality corporations and tourist destinations. Special emphasis is placed on group markets and gaining travel retailer support for destinations, hotel corporations, and cruiselines. The course may be followed by a sales management internship. Prerequisite: HFT 3503. (F,S)

**HFT 3603 Law as Related to the Hospitality Industry (3).** A basic course in hotel, motel, and restaurant law. The student is introduced to the fundamental laws, rules, and regulations applicable to the hospitality industry. The case study approach is used to develop an awareness and understanding of the legal problems confronting the executive in his policy and decision making role. (F,S)

**HFT 3700 Fundamentals of Tourism (3).** An introduction to the broad fields of travel and tourism. Among the topics covered are cultural tourism, sociology of tourism, tourism components and supply, tourism development, the economic role of tourism demand, and the marketing of tourism. (F,S,SS)

**HFT 3713 International Travel and Tourism (3).** An introduction to the complete international scope of travel and tourism. A brief analysis of regional framework and specific regions of the world, the interrelationship between human society and the physical environment. Tourism as a factor in economic development and its cultural and sociological factors are explored. An analysis of the international organization of tourism and the facilitation procedures required for its successful implementations are highlighted. (S)

**HFT 3733 Creative Tour Packaging (3).** A thorough study of the functions of the wholesale tour operation. Includes tour operations and development, sales methods used in selling group business, costing and contracting of group business, and in-depth study of the promotional aspects of tour packaging. (S)

**HFT 3753 Convention and Trade Show Management (3).** A course concentrating on organizing, arranging and operating conventions, trade shows, and concessions. Emphasis will be placed on the modes and methods of sales used in booking conventions and trade shows, as well as the division of administrative responsibility in their operation. (F,S)

**HFT 3793 Sociology of Leisure (3).** An introduction to the fundamental, psychological and sociological concepts and theories as they relate to the motivation behind travel and tourism. (SS)

**HFT 3871 Beverage Management (3).** An introduction to the identification, use and service of wines and other alcoholic beverages, with an in-depth analysis of the various elements of beverage operations including purchasing, control, merchandising, and bar management. Field trips are made to hotels and restaurants to demonstrate salient operating principles. (F,S)

**HFT 3872 Wine Technology, Merchandising, and Marketing (3).** A course in the fundamentals of wine technology (viticulture and vinification methods). The major types of wine and the factors influencing their quality; principles of sensory evaluation; wine merchandising and marketing. (F,S)

**HFT 3900-3905 Independent Studies (VAR).** With permission from the Associate Dean, students may engage in independent research projects and other approved phases of independent study. (F,S,SS)

**HFT 3941 Internship in Hospitality Management (3).** Experience in all the major phases of hospitality operations. Reports are required. Prerequisite: Permission of instructor. (F,S,SS)

**HFT 3945 Advanced Internship in Hospitality Management (3).** Structured management experience in a specialized field in the hospitality industry. Programs include: food and beverage management, rooms division management, sales management, in-flight catering management, fast food service management, and restaurant management. Structured management experience with an airline, a travel agency, a tour operator, or a cruiseline. Report required. (F,S,SS)

**HFT 4223 Human Resources Development in the Hospitality Industry (3).** A course designed to provide specific applications of proven training systems and methods for managers in the hospitality industry. The case study method will be used. (F,S)

**HFT 4224 Human Relations in the Hospitality Field (3).** The problems faced by the supervisor and the executive in managing the human element in the hospitality field. Designed to give the student insight into the varied social and psychological factors present in any employee-employer relationship. (F,S)

**HFT 4234 Union Management Relations in the Hospitality Industry (3).** A comprehensive course covering labor legislation, union history, and the day-to-day administration of the labor contract. Emphasis is placed on collective bargaining and the business relationships between union and management.

**HFT 4293 Restaurant Management Seminar (3).** By permission of instructor only. A senior course reviewing current problems and practices, developing policies and procedures, and implementing same.

**HFT 4295 Catering Management (3).** A study of the techniques, logistics, and responsibilities involved in the management of on-premise and off-premise, and catering companies. Prerequisites: FSS 3221 and HFT 3263. (F,S,SS)

**HFT 4404C Institutional and Contract Foodservice (3).** Management systems, methods, and procedures related to the operation of foodservice and vended foodservice in plants and factories, office buildings, schools and colleges, and health care facilities. Both company and contracted operations.

**HFT 4405 Institutional and Contract Food Service Management (3).** Methods and systems of managing food service operations in recreational facilities, such as stadiums and coliseums, amusement parks, mutual (betting) facilities, state and national parks, and other recreational areas. (F,S)

**HFT 4413 Lodging Systems and Procedures (3).** Detailed study of methods used in serving guests of a hotel. Contrasts traditions with modern systems. Demonstrates "state-of-art" concepts. Prerequisite: HFT 3423. (SS)

**HFT 4445 Hotel Computer Systems (3).** A seminar on computer systems within the hotel industry. An intensive study of a computerized property management system. All computer applications are examined from reservations to the back office through a series of assignments and projects. Prerequisites: HFT 3423 and permission of instructor. (F,S,SS)

**HFT 4455 Functions of the Hospitality Industry Comptroller (3).** A specialized course designed for students desiring strong emphasis and training in the complex accounting and finance functions of hospitality industry management. Prerequisite: HFT 3453.

**HFT 4464 Interpretation of Hospitality Industry Financial Statements (3).** In-depth study of hospitality industry financial statements including consideration of the significant relationships between the various accounts found on financial reports. The statement of changes in financial position is studied, emphasizing funds as a means of payment. Major emphasis is placed upon trend analysis, ratio analysis, and comparison analysis using hospitality industry annual studies. Prerequisite: HFT 3453. (F,S,SS)

**HFT 4474 Profit Planning and Decision-Making in the Hospitality Industry (3).** Study of the decision-making process involved in the development of profit plans through analysis of hospitality industry studies. The establishment of short and long term goals and the means to reach these goals through profit plans. Emphasis on pricing decisions, responsibility centers, variance analysis, cost-volume profit analysis, capital budgeting, and tax considerations. Prerequisite: HFT 4464. (F,S,SS)

**HFT 4479 Food Service Systems Development (3).** A lecture course presenting the systems and procedures to develop a food service operation from concept to opening. Prerequisites: HFT 3403 and HFT 3503

**HFT 4493 Food Service Computer Systems (3).** Study of computer systems in restaurant industry. The student is required to implement a simulated restaurant. This simulation includes personnel files, daily management, menu explosion and analysis, and inventory tracking. In addition, a research project will be assigned. Prerequisites: HFT 3423 or HFT 6646 and permission of instructor. (F,S,SS)

**HFT 4512 Hospitality Promotion Strategy (3).** This course deals with the practical aspects of designing and implementing a hospitality advertising, public relations, and promotional program. Planning, budgeting, media, and campaign creation will be studied. (S)

**HFT 4604 Legislation and the Hospitality Industry (3).** A study of the legislative requirements imposed upon hospitality industry operators. Special emphasis is placed on the minimum wage law, sales tax, uniform provision and maintenance, tip credit, and the determination of what constitutes hours worked for the various job categories, discrimination, and sexual harassment. Prerequisite: HFT 3603. (F,S,SS)

**HFT 4654 Financial and Legal Aspects of Real Estate Development in the Hospitality Industry (3).** A study of the legal implications and financing alternatives for development of new properties and conversions.

**HFT 4718 Implementation and Management of Tourism Projects (3).** Practical development, implementation, and management of tourism projects and programs with emphasis on international and developing nation situations. Prerequisites: HFT 3700 and HFT 3793 or equivalent.

**HFT 4880 In-Flight Food Service Management (3).** An introduction to the concepts and managerial techniques specifically related to the in-flight food service segment of the hospitality industry. Students will be exposed to a comprehensive study of contract purchasing, contract negotiations, system menu planning, volume food production, staff scheduling, industry pricing methods, product specification factors, client and employee relations, and security control systems; and familiarized with specific and specialized food service equipment, equipment routing and balance, and transportation methods and procedures.

**HFT 4936 Hotel Management Seminar (3).** A senior course reviewing current problems and practices, developing policies and procedures, and implementing same. Prerequisite: Permission of instructor.

## School of Hospitality Management

| | |
|---|---|
| Dean | *Anthony G. Marshall* |
| Associate Dean | *Rocco M. Angelo* |
| Assistant Dean | *Lee C. Dickson* |

### Faculty

**Angelo, Rocco M., M.B.A.** *(University of Miami), Associate Professor, Management and Associate Dean*

**Bellucci, Elio, J.D.** *(Boston College), Associate Professor, Law*

**Burritt, M. Chase, B.S.** *(Cornell University), Visiting Assistant Professor, Management*

**Cassidy, Patrick, B.S.** *(Florida International University), Visiting Lecturer, Wine Technology*

**Darby, Percival, M.S.** *(Florida International University), Assistant Professor, Management*

**Deveau, Patricia M., M.S.** *(University of New Haven), Assistant Professor, Information Systems Management*

**Dickson, Lee C., M.B.A.** *(Babson College), Associate Professor, Management and Marketing and Assistant Dean*

**Goffe, Peter, J.D.** *(University of Miami), Associate Professor, Marketing*

**Gregg, Joseph B., Ed.D** *(Nova University), Associate Professor, Management and Marketing*

**Grier, David,** *Instructor, Beverage Management*

**Hagenmeyer, Fritz, G., M.A.** *(Cornell University), Associate Professor, Hotel Engineering*

**Haleblian, Albert J., B.S. C.P.A.** *(Cornell University), Associate Professor, Accounting and Finance*

**Hansen, William M., M.S.** *(Florida International University), Adjunct Lecturer, Food Management*

**Hebrank, William, B.S.** *(University of Illinois) Adjunct Lecturer, Wine Technology.*

**Hurst, Michael E., M.A.** *(Michigan State University), Professor, Management*

**Huse, Richard A., M.S.** *(Niagara University), Associate Professor, Tourism*

**Ilvento, Charles L., M.B.A., C.P.A.** *(Cornell University), Associate Professor, Accounting and Finance*

**Kotschevar, Lendal, Ph.D.** *(Columbia University), Professor, Management*

**Marshall, Anthony G., J.D.** *(Syracuse University), Professor, Law and Dean*

**Moll, Steven V., M.S.** *(Florida International University), Associate Professor, Accounting and Information Systems Management*

**Moncarz, Elisa, B.B.A., C.P.A.** *(Bernard/Baruch College, City U. of New York), Associate Professor, Accounting and Finance*

**Moran, Michael J., B.S.** *(Florida International University), Lecturer, Food Management*

**Morgan, William J., Jr., Ph.D.** *(Cornell University), Professor, Management*

**O'Brien, William, M.S.** *(Florida International University), Associate Professor, Information Systems Management*

**Parker, Alan J., Ph.D.** *(Columbia University), Professor, Information Systems Management*

**Perl, Barry L., M.S., C.P.A.** *(Florida International University) Adjunct Lecturer, Accounting and Finance*

**Portocarrero, Nestor, B.B.A. C.P.A.** *(University of Miami), Associate Professor, Accounting and Finance*

**Probst, Roger, B.S.** *(University of New Haven), Lecturer, Food Management*

**Remington, Joan S., J.D.** *(Willamette College), Adjunct Lecturer, Management and Marketing*

**Ringstrom, Norman H., Ph.D.** *(State University of Iowa), Professor, Management*

**Robson, Kevin, M.S.** *(Florida International University), Associate Professor, Food Management*

**Stanford, William,** *Lecturer, Food Management*

**Talty, David M., B.S.** *(Florida State University), Visiting Assistant Professor, Management.*

**Tanke, Mary L., Ph.D.** *(Purdue University), Associate Professor, Management*

**Vladimir, Andrew, M.S.** *(Florida International University), Visiting Assistant Professor, Management*

**Warner, Mickey, Ed.D.** *(Florida International University), Associate Professor, Food Management*

**White, Theodore, B.S.** *(Florida International University), Lecturer, Club Management*

# School of Nursing

The School of Nursing offers a professional program of study leading to the degree of Bachelor of Science in Nursing (BSN).

The School is accredited by the National League for Nursing and is approved by the Florida State Board of Nursing. It is open to generic and R.N. students. Upon graduation, generic students are eligible to write the State Board examination to become registered nurses.

The School also offers certificate programs in Advance Nursing Practice in Adult Health and Psychiatric/Mental Health. This program qualifies the student to apply for ARNP licensure in Florida.

### Program Objectives

Upon completion of the BSN, graduates will be able to:

1. Synthesize knowledge from the natural and the behavioral sciences, the humanities and nursing in the provision of nursing care to clients throughout the life span.

2. Analyze research findings from nursing and other disciplines to improve and change nursing practice.

3. Evaluate nursing theories and concepts from other disciplines as a base for nursing practice.

4. Utilize the nursing process to promote, maintain and restore health and rehabilitate, and prevent illness of individuals, families and communities in a changing multicultural, global society.

5. Analyze legal, ethical, social, political, and economic forces which impact on the emerging role of the professional nurse.

6. Collaborate with members of the health care team in the delivery of individualized, economic and ethical health care services with accountability and responsibility for their own practice.

7. Utilize creative leadership to promote quality health care in a changing, multicultural, global society.

8. Value learning as a lifelong process through independent pursuit of personal and professional growth.

## Bachelor of Science in Nursing (BSN)

### Admission Requirements

Applicants to the School of Nursing must submit an Application for Admission to the University and must follow the regular University procedures. Applicants must be admitted to the University before admission to the School. R.N. students must be licensed or eligible for graduate nurse (G.N.) status at the time of application, (Florida Statute 464.01).

All necessary admission documents must be submitted by April 1 of each year preceding the Fall Term admission or October 15 of each year preceding the Spring Term admission. Students interested in the nursing major should contact the School to make an appointment with an academic advisor as soon as possible. The School of Nursing is located on the North Miami Campus, telephone: (305) 940-5915. In addition, an RN-BSN completion program is offered at the Broward Program in Davie, telephone (305) 948-6747 (Miami number), or (305) 474-1402 (Broward number).

To be admitted to the program, applicants must have an overall GPA of 2.5 or higher, have met all the lower division requirements including CLAST, completed 60 semester hours, and be recommended for admission by the Nursing Admission Committee. The nursing program is selective. Limitations are set on enrollment on the basis of availability of qualified faculty, classroom and laboratory facilities, and clinical resources for student experiences.

### Lower Division Preparation

The following courses are required for admission to the nursing major:

| | |
|---|---|
| 1. Introduction to Statistics | 3 |
| 2. Natural Sciences: | |
| Chemistry | 5-8 |
| Human Anatomy/Physiology | 6-8 |
| Microbiology | 4 |
| 3. Social Science: | |
| Introductory Sociology | 3 |
| Introductory Psychology | 3 |
| Language Elective | 3-5 |
| 4. Nutrition | 3 |
| 5. Human Growth & Development | 3 |

### Scholastic Requirements

To remain in good academic standing students must:

1. Maintain an overall cumulative GPA of 2.25 or higher.

2. Achieve a grade of 'C' or higher in the science and nursing courses. A student who earns less than a 'C' in any nursing course will be required to repeat the course in order to progress in the nursing program. A student may repeat the course one time only. No more than two nursing courses can be repeated in order to remain in the program.

3. Required Examinations: In addition to the University requirements (CLAST), the School also requires the following:

a. RN's are required to complete selected equivalency examinations. (See RN - BSN Guidelines).

b. Generic students are required to pass specific nursing achievement examinations (To be announced at the beginning of each academic term). In addition, generic students are required to pass also a nursing synthesis (exit) exam as a prerequisite to the BSN degree. (This examination is usually given during the last semester of the program in the Senior Seminar courses).

c. For educational research purposes, certain standardized examinations may be administered at selected points in the nursing curriculum.

4. The School reserves the right to terminate a student from the nursing program for reasons related to the inability to safely carry out professional responsibilities.

*Note:* The programs, policies, requirements, and regulations listed in this catalog are continually subject to review in order to serve the needs of the University's various publics and to respond to the mandates of the Florida Board of Regents and the Florida Legislature. Changes may be made without advance notice. Please refer to the General Information section for the University's policies, requirements, and regulations.

### Required Nursing Courses

**Junior Year**

**Semester I**

| | | |
|---|---|---|
| NUR 3118 | Approaches to Nursing I | 4 |
| NUR 3118L | Approaches to Nursing I Lab | 3 |
| NUR 3066C | Approaches to Nursing IB | 3 |
| NUR 3825 | Professional Nursing I | 2 |
| NUR 3145 | Pharmacology | 2 |

**Semester II**

| | | |
|---|---|---|
| NUR 3255 | Approaches to Nursing IIA | 2 |
| NUR 3255L | Approaches to Nursing IIA Lab | 3 |
| NUR 3535 | Approaches to Nursing IIB | 1 |
| NUR 3535L | Approaches to Nursing IIB Lab | 3 |
| NUR 3826 | Professional Nursing II | 2 |
| NUR 3125 | Pathophysiologic Basis of Nursing | 3 |

**Semester III**

| | | |
|---|---|---|
| NUR 3259 | Approaches to Nursing IIIA | 2 |
| NUR 3259L | Approaches to Nursing IIIA Lab | 3 |
| NUR 3538 | Approaches to Nursing IIIB | 2 |
| NUR 3538L | Approaches to Nursing IIIB | 3 |
| NUR 3827 | Professional Nursing III | 2 |
| Elective | | 3 |

**Senior Year**

**Semester I**

| | | |
|---|---|---|
| NUR 4457 | Approaches to Nursing IVA | 3 |
| NUR 4457L | Approaches to Nursing IVAL | 3 |
| NUR 4357 | Approaches to Nursing IVB | 3 |
| NUR 4357L | Approaches to Nursing IVB | 3 |
| NUR 4165 | Professional Nursing IV | 3 |
| Elective | | 3 |

**Semester II**

| | | |
|---|---|---|
| NUR 4636 | Approaches to Nursing V | 2 |
| NUR 4636L | Approaches to Nursing V | 3 |
| NUR 4945L | Approaches to Nursing VI | 4 |
| NUR 4896 | Professional Nursing V | 2 |
| Nursing Elective | | 2/3 |

## ARNP Certificate Program in Adult Health

A student who has earned a BSN degree and is a registered nurse in Florida may be considered for admission to the ARNP certificate program. The student must meet the University requirements and must have completed one year of nursing experience. Admission requirements are (1) a BSN degree, which includes a physical assessment course; (2) 3.0 GPA or individual determination; (3) current RN licensure and CPR certification; and (4) a physical examination including measle titre.

Before starting the admission process, the RN is encouraged to make an appointment with a nursing academic advisor to determine his or her status. The student is encouraged to bring a personal copy of all transcripts of previous college courses to assist in the advisement process. An appointment can be made by calling 940-5915.

Completion of the certificate program will qualify the student to apply for ARNP licensure in Florida. This is a full time nursing program that requires a minimum of 24 hours per week in addition to study time. The certificate is designed to be completed in two academic terms. Classes are held one late afternoon and early evening each week. Field work times are flexible.

A minimum of 30 credit hours must be earned to received the certificate.

**Required Courses:** (31 semester hours)

**First Semester**

| | | |
|---|---|---|
| NGR 5113 | Theoretical Foundations of the Expanded Role of Nurse | 3 |
| NGR 5145 | Psycho/Physiologic Basis of Advanced Nursing I | 4 |
| NGR 5145L | Psycho/Physiologic Basis of Advanced Nursing I: Clinical | 8 |

**Second Semester**

| | | |
|---|---|---|
| NGR 5740 | Theoretical Foundations of Teacher/ Manager/ Advocate Role of Nurse Practioner | 2 |
| NGR 5146 | Psycho/Physiological Basis of Advanced Nursing I | 3 |
| NGR 5745 | Case Management Preceptorship in Advanced Adult Health Nursing | 7 |

Electives: Courses in Nursing, Computer, Health Services Administration, Psychology, etc. 3

**Required Courses**

Please consult the Department

## Course Descriptions

**Definition of Prefixes**

NGR - Nursing Graduate; NSP - Nursing Special Courses; NUR - Nursing Practice and Theory

**NGR 5113 Theoretical Foundations of the Expanded Role of the Nurse (3).** A didactic course on expanded role realignment, legal-ethical implications of ARNP role, interviewing and communication skills and extant nursing models. Prerequisite: Florida RN with BSN. Corequisite: NGR 5145.

**NGR 5145 Psycho/Physiologic Basis of Advanced Nursing I (4).** A multidisciplinary didactic course integrating the nursing process and the relevant sciences as a basis for advanced nursing practice. Directed field clinical practicum on implementing the expanded nurse role in a specific setting. Prerequisite: Florida RN with BSN. Corequisite: NGR 5113.

**NGR 5145L Psycho/Physiologic Basis of Advanced Nursing I: Clinical Practium (8).** Directed field practium implementing the expanded nursing role in an ambulatory and/or acute care setting. Emphasis on differential diagnosis, intiating and monitoring protocols and case management. Prerequisites: Admission to ARNP certificate program. Corequisites: NGR 5145, NGR 5113.

**NGR 5146 Psycho/Physiological Basis of Advanced Adult Nursing II (3).** An advanced multidisciplinary didactic course integrating the nursing process with related sciences as a basis for advanced nursing practice. Prerequisite: Florida RN with BSN. Corequisites: NGR 5740 and NGR 5745.

**NGR 5200 Physical Change and Healthy Aging (3).** Course focuses on primary health care and wellness with discussion and assessment of normal physiologic alterations and their relationship to common health concerns and medical problems of the elderly.

**NGR 5740 Theoretical Foundations of the Teacher/ Manager/Advocate Role of the Nurse Practitioner (2).** A workshop group presentation on problems related to the teacher/manager/advocate role of the adult nurse practitioner in a client setting. Prerequisites: Florida RN with BSN. Corequisites: NGR 5146 and NGR 5745.

**NGR 5745 Case Management Preceptorship in Advanced Adult Health Nursing (7).** Advanced clinical case management preceptorship in adult geriatric family community or other selected speciality. Prerequisite: Florida RN with BSN. Corequisites: NGR 5740 and NGR 5146.

**NGR 5905 Independent Study in Nursing (1-10).** Individually determined, research oriented, in-depth study of a nursing problem or clinical experience as approved by the faculty preceptor. Prerequisites: BSN, permission of instructor, and admission to a graduate program.

**NGR 5936 Special Topics In Nursing (1-6).** Group study of a specific topic or a limited number of related topics in nursing. Prerequisite: Must be a nursing student or Florida licensed RN.

**NSP 4775 Perioperative Nursing (3).** Introduction and exploration of perioperative nursing practice during the three phases of surgical intervention; pre-operative, intra-operative, and post-operative. Prerequisite: RN licensure or BSN senior standing.

**NUR 3066C Approaches to Nursing I B: Client Assessment (3).** The assessment and evaluation of alterations in physiologic adaptive responses of the adult/gerontological client to stressors are emphasized. Prerequisite: Admission to major. Corequisite: NUR 3118.

**NUR 3118L Approaches to Nursing I: Foundations-Clinical (3).** In the clinical area, the nursing process is utilized to facilitate adaptive responses of clients exhibiting unaltered to minimally altered health states. Prerequistes: Admission to the nursing program. Corequisite: NUR 3118.

**NUR 3118 Approaches to Nursing I (4).** Introduction to the Nursing Process and Nursing Care of individuals throughout the life span within the health-illness continuum with special focus on the promotion of optimum wellness. Prerequisite: Admission to the program. Corequisite: NUR 3118L.

**NUR 3125 Pathophysiologic Basis of Nursing Practice (3).** The body's adaptive responses to selected physical, chemical, and biological stressors are presented as a base for nursing diagnoses, interventions, and evaluations. Prerequisites: NUR 3145, NUR 3066, NUR 3118C. Corequisites: NUR 3259, NUR 3538.

**NUR 3145C Pharmacologic Basis for Nursing Practice (3).** Focus is on clinical pharmacology including development and control of drugs and drug therapies, general principles or specific drug actions and the body's physiologic response to drug administration. Prerequisite: NUR 3118C, NUR 3066. Corequisites: NUR 3255, NUR 3535.

**NUR 3255 Approaches to Nursing II A: Adult/Gerontological Physiological Nursing I (2).** The nursing process is applied in assisting the adult/gerontological client with minimally to moderately impaired physiological adaptive responses. Prerequisites: NUR 3118, 3118L. Corequisites: NUR 3255L.

**NUR 3255L Approaches to Nursing IIA: Adult Gerentological Physiological Nursing I: Clinical Experience. (3).** In the clinical setting, the nursing process is applied to assisting the adult client with minimally to moderately altered physiologic adaptive responses. Prerequisites: NUR 3118, NUR 3118L. Corequisite: NUR 3255.

**NUR 3259 Approaches to Nursing III A: Adult/Gerontological/Physiological (2).** The nursing process is applied in assisting adult/gerontological clients with moderate to severe adaptive alterations or terminal conditions, including the effects of family. Prerequisites: NUR 3255, NUR 3255L, NUR 3535, NUR 3535L. Corequisites: NUR 3259L.

**NUR 3259L Approaches to Nursing IIIA: Adult/Gerontological Physiological Nursing II Clinical Practice. (3).** In the clinical area, the nursing process is applied to assist the adult client with moderate to severe physiologic adaptive alterations and those with terminal conditions. Prerequisites: NUR 3255, NUR 3255L, NUR 3535, NUR 3535L. Corequisite: NUR 3259.

**NUR 3535 Approaches to Nursing IIB: Psychosocial NSG I (1).** Application of the Nursing Process to the care of individual, families, and groups within the health-illness continuum with special focus on changing psychosocial situations. Prerequisites: NUR 3118, NUR 3118L. Corequisites: NUR 3535L.

**NUR 3535L Approaches to Nursing IIB: Psychosocial Nursing I Clinical Experience (3).** In a selected area, the nursing process is applied to assisting clients with minimally to moderately altered psychological responses. Prerequisites: NUR 3118, NUR 3825, NUR 3066C, NUR 3145. Corequisite: NUR 3535.

**NUR 3538 Approaches to Nursing III B: Adult/Gerontological Psychological Nursing II (2).** The nursing process is applied in assisting the adult/gerontological client and his family with moderately to severely impaired psychological responses. Prerequisites: NUR 3255, NUR 3255L, NUR 3535, NUR 3535L. Corequisite: NUR 3538L.

**NUR 3538L Approaches to Nursing IIIB: Psychosocial Nursing II Clinical Experience. (3).** In a selected clinical area, the nursing process is applied to assisting clients with moderately to severely altered psychological responses. Prerequisites: NUR 3535, NUR 3535L, NUR 3255, NUR 3255L. Corequisite: NUR 3538.

**NUR 3596 Crisis Intervention and Nursing (3).** This course will examine the crisis state, what it is, when it occurs and how the nurse can aid the individual, family or group in crisis.

**NUR 3825 Professional Nursing I: Socialization (2).** Socialization into the role of prolessional nursing is introduced. The teaching-learning process is explored with emphasis on the student's responsibilities as an independent learner. Prerequisite: Admission to the program. Corequisite: NUR 3118C.

**NUR 3826 Professional Nursing II: Legal, Ethical and Cultural Consideration (2).** This course continues to address professional dimension in nursing. Emphasis is on legal, ethical, and cultural considerations using group dynamics. Prerequisites: NUR 3118C; PCB 4496; NUR 3825. Corequisite: NUR 3137.

**NUR 3827 Professional Nursing III: Leadership (2).** This course is designed to provide a forum for students to analyze and critique the leadership role of the professional nurse in a variety of health care settings within a multicultural, changing global society. Prerequisites: NUR 3538, NUR 3356.

**NUR 4075 Transcultural Issues and the Nurse (2).** The course is designed to guide the student into direct relationships with individuals of ethnic and racial differences, and to facilitate the development of a therapeutic relationship.

**NUR 4076 Nursing-An International Perspective (3).** This course is designed to provide the student with a global view of nursing as it is defined, organized and practiced. Prerequisites: Admitted to Nursing Program or Florida licensed R.N.

**NUR 4165 Professional Nursing IV: Research (3).** Interrelationship of problems solving, decision making, change and the nursing process are explored in identifying the role of the professional nurse as research consumer. Prerequisite: NUR 3125.

**NUR 4357 Approaches to Nursing IV B: Childrearing (3).** The nursing process is applied in assisting childrearing families exhibiting moderately to severely impaired adaptive responses. Prerequisites: NUR 3259, NUR 3259L, NUR 3538, NUR 3538L. Corequisite: NUR 4457L.

**NUR 4357L Approaches to Nursing IVB: Child-rearing family: Clinical Experience (3).** In the clinical area, the nursing process is applied in assisting the child-rearing family exhibiting moderately to severely altered adaptive responses. Prerequisites: NUR 3259, NUR 3259L, NUR 3538, NUR 3538L. Corequisite: NUR 4457.

**NUR 4457 Approaches to Nursing IV A: Childbearing (3).** The nursing process is applied in assisting childbearing families exhibiting moderately to severely adaptive alterations. Prerequisites: NUR 3259, NUR 3259L, NUR 3538, NUR 3538L. Corequisite: NUR 4137L.

**NUR 4457L Approaches to Nursing IVA: Childbearing Family: Clinical Experience (3)** In the clinical area, the nursing process is applied in assisting the childbearing family exhibiting moderately to severely altered adaptive responses. Prerequisites: NUR 3259, NUR 3259L, NUR 3538, NUR 3538L. Corequisite: NUR 4137.

**NUR 4496 Women's Health Issues (3).** This course is designed to acquaint the student with selected conditions impacting the health of women.

**NUR 4636 Approaches to Nursing VI: Community Health Nursing (4).** Evaluation of the nursing process to the care of individuals, families, and groups within the health-illness continuum with special focus on the community and health care systems. Prerequisites: NUR 4165; NUR 4424. Corequisite: NUR 4945.

**NUR 4636L Approaches to Nursing V: Community Nursing: Clinical (3).** In the clinical area, the nursing process is utilized in assisting the individual, family and community. The student operationalizes all nursing professional roles in the application of care. Prerequisites: NUR 4457, NUR 4457L, NUR 4437, NUR 4437L. Corequisite: NUR 4432.

**NUR 4896 Professional Nursing V: Senior Seminar (2).** Professional issues related to nursing as an autonomous professional practice are investigated. Focus is on the transition from student to beginning generalist nurse role. Prerequisite: NUR 4457, NUR 4357, NUR 4165. Corequisites: NUR 4945, NUR 4636C.

**NUR 4945L Approaches to Nursing VII: Leadership Practicum (4).** Transition from student to graduate role is provided through leadership experience in an elected setting which allows synthesis of knowledge, skills, and understandings. Assessment of nursing care modalities is emphasized. Prerequisites: NUR 4165; NUR 4424. Corequisite: NUR 4636C.

**NUR 4947 Directed Field Experience in Nursing (3).** Application and refinement of nursing in a clinical specialty area. Prerequisites: Florida RN and permission of instructor.

## School of Nursing

**Dean** *Linda Agustin Simunek*

**Faculty**

**Allen, *Patricia H., RN, MSN*** *(Catholic University of America), Visiting Assistant Professor*

**Beckerman, Anita, ARNP, Ed.D.** *(Columbia University), Associate Professor*

**Belock, Shirley A., R.N., Ed.D.** *(Nova University), J.D. (University of Miami), Professor and Associate Dean*

**Blais, Kathleen, R.N., Ed.D.** *(Florida Atlantic University), Assistant Professor and Director Broward Program*

**Burkett, Marjorie, RN, Ph.D.** *(University of Miami), Assistant Professor*

**Canty, Janie, RN, MS** *(University of Miami), Assistant Professor*

**Chaves, Doris, RN, Ph.D.** *(Mississippi State University) Visiting Professor*

**Ellis, Avalia, RN, MS** *(Barry University), Visiting Instructor*

**Grossman, Divina, RN, Ph.D.** *(University of Pennsylvania) Associate Professor*

**Hartley, Jacquelyn, RN, Ph.D.** *(Florida State University) Associate Professor and Chairperson*

**Jorda, Marie Louise, RN, MPH,** *(University of North Carolina at Chapel Hill), Visiting Instructor*

**Lizardo, Maria Lourdes, ARNP, M.N.** *(University of the Philippines), Assistant Professor*

**Lobar, Sandra, R.N., M.S.N.** *(Barry University), Assistant Professor*

**Northrop, Celeste, ARNP, D.N.Sc.** *(Catholic University of America), Assistant Professor*

**Phillips, Suzanne, R.N., M.S.** *(University of Utah), Assistant Professor*

**Porter, Luz, RN, P.h.D.** *(University of New York), Professor and Director MSN Program*

**Roberts, Carol, RN, MS** *(Boston University), Visiting Assistant Professor*

**Safian-Rush, Donna, ARNP, Ed.D.** *(Florida International University) Assistant Professor and Chairperson*

**Simunek, Linda Agustin, R.N., Ph.D., J.D.** *(Loyola University of Chicago), J.D. (University of Miami), Professor and Dean*

**Thornton, Rosa N., R.N., MPH** *(Florida International University), Academic Advisor*

# School of Public Affairs and Services

The School of Public Affairs and Services, which was established in 1978, contributes directly to the overall mission of Florida International University as a comprehensive, multi-campus, urban institution for advancing higher education, research and service in an international community environment.

The School provides education, training and research that responds to the professional development, problem assessment, policy formulation, and program implementation needs of individuals, public service agencies and other organizations addressing important public policy problems and issues in the state, the nation and the Latin American regions served by the University.

The School offers degree programs of professional study which provide academic and applied courses for students interested in public and non-profit organizational needs, management, and research. The School is organized into the Departments of Criminal Justice, Health Services Administration, Public Administration and Social Work. Each of these Departments offer both the baccalaureate and master's degrees. In addition, a Doctor of Philosophy (Ph.D.) is offered in Public Administration, and a Ph.D. in Social Welfare is being planned.

## Admission

Applicants to the School must submit an Application for Admission to the University and must follow the regular University procedures. Applicants must be eligible for admission to the University before admission to the School.

## Bachelor Degrees

### Baccalaureate Admission Requirements

FIU freshmen and sophomore students may be coded with an "intended" major in the School upon earning 24 semester hours.

They may be fully admitted to the School if they have earned 60 semester hours, have a cumulative grade point average (GPA) of 2.0, have passed the CLAST, and met the specific degree program admission requirements. Full admission to the School is accomplished by filing the form "Request for Acceptance into Upper Division College/School."

A transfer student with an Associate of Arts degree from a Florida community college, or having completed the equivalent coursework at a four year institution with a minimum of 60 semester hours earned, having a cumulative grade point average (GPA) of 2.0, having passed the CLAST, and having met the specific degree program requirements may be admitted to a program in the School. Applicants must submit an Application for Admission to the University and must follow the regular University procedures. Applicants must be eligible for admission to the University before admission to the School.

All students are encouraged to seek advising as early as possible in the department/program of their choice, even if they have not yet been fully admitted into that major.

### Academic Advisement

A student who has been accepted to a degree program in the School will be assigned an academic advisor by the Department in which the academic major is desired. Continued contact (at least once a semester) with the academic advisor is urged to review progress and select courses for each succeeding semester. Such contact is required until an approved program of study is completed.

Candidates to the bachelor's degree must satisfy individual department requirements which are described in the appropriate departmental sections of this catalog.

### Clinical and Field Experiences

As an integral part of the program curriculum, the student may be provided supervised learning experiences in community service agencies. The clinical and field work experience is one of orientation, observation, and practice in the particular program specialty of Public Affairs and is structured concurrently with relevant classroom experiences. Numerous community organizations provide opportunities for student internships and field practices.

## Continuing Education and Special Programs

The School of Public Affairs and Services, in cooperation with the Division of Continuing Education, offers many credit, non-credit, and workshop courses in Off-Campus locations in Dade, Broward, and Monroe Counties. Courses and locations vary each semester and the departments should be contacted for specific offerings.

***Note:*** The programs, policies, requirements, and regulations listed in this catalog are continually subject to review, in order to serve the needs of the University's various publics and to respond to the mandates of the Florida Board of Regents and the Florida Legislature. Changes may be made without advance notice. Please refer to the General Information section for the University's policies, requirements, and regulations.

# Criminal Justice

**Ray Surette,** *Associate Professor and Acting Director*
**Robert Clark,** *Professor*
**Jose Marques,** *Associate Professor*
**Luis Salas,** *Professor*
**Dale Sechrest,** *Assistant Professor*
**Regina Shearn,** *Associate Professor*
**Robert Snow,** *Associate Professor*
**W. Clinton Terry,** *Associate Professor*
**James Vardalis,** *Visiting Assistant Professor*
**William Wilbanks,** *Professor*

Criminal Justice is an area of study dealing with the formal mechanisms of social control by which society exercises constraint over its members. The study of criminal justice is interdisciplinary. It involves law, the social and behavioral sciences, crime, the reaction of society to the crime problem, and the means utilized in treating it.

A variety of career opportunities are available in criminal justice at all levels of government and the private sector. Due to its interdisciplinary approach, the study of criminal justice fills the needs of students seeking careers in teaching, research, law, and within the various agencies of the criminal justice system.

## Bachelor of Science in Criminal Justice

### Lower Division Preparation

Students majoring in criminal justice should consult with their academic advisor to ensure that the courses they selected meet program and degree requirements, and are consistent with their long range academic and career objectives.

### Recommended Courses

Students intending to enroll in the criminal justice program are urged to complete an Associate in Arts degree at the lower division. Entering students are not required to have been enrolled in a pre-criminal justice program. Students having an Associate in Science degree or 60 semester hours will also be accepted, but must complete general education requirements before the bachelor's degree can be awarded.

To qualify for admission to the program, FIU undergraduates must have

met all lower division requirements, including CLAST, completed 60 semester hours, and must be otherwise acceptable into the program.

### Upper Division Program

#### Core Courses

Six courses are required of every student in criminal justice. A core course requirement can only be waived by the Director with the recommendation of the student's faculty advisor.

| | | |
|---|---|---|
| CCJ 3011 | Nature and Causes of Crime | 3 |
| CCJ 3101 | Law Enforcement Systems | 3 |
| CCJ 3290 | Judicial Policy Making | 3 |
| CCJ 3300 | Correctional Philosophy, Theory and Practice | 3 |
| CCJ 3700 | Methods of Criminal Justice Research | 3 |
| CCJ 4252 | Criminal Justice and the Constitution | 3 |

#### Area of Interest

Eighteen semester hours at the 3000-level or above in criminal justice are required for criminal justice majors. Only nine semester hours of CCJ 4940 will count toward this requirement.

#### Specific Electives

Nine semester hours at the 3000-level are required in sociology-anthropology, social work, psychology, political science, computer science, public administration, or statistics. Any combination of these courses is acceptable.

#### General Electives

Fifteen semester hours are required. No more than nine hours can be criminal justice courses. Relevancy of elective courses will be determined in consultation with the student's advisor or the Director. The faculty retains the prerogative to accept or reject electives taken without approval.

*Remarks*: Independent study and directed reading courses may not be taken outside of the Criminal Justice Department except with written permission of the Criminal Justice Director.

Coursework from disciplines outside of criminal justice will not be accepted to fulfill requirements in the criminal justice area of interest category.

Students are required to maintain a minimum GPA of 2.0 in the criminal justice area of interest and a minimum grade of 'C-' in each of the criminal justice core courses.

Criminal justice majors are advised to complete all core requirements in the early stages of their study in order to insure completion for graduation.

#### Transfer Credit

A student transferring from a four year college may transfer up to 84 semester hours into the criminal justice program; however, the student must still have at least 60 semester hours at the 3000-level or above. All work transferred to FIU is subject to review and approval by the Criminal Justice Director. Criminal justice courses completed with a grade of 'D' will not be transferred.

#### Double Majors and Degrees

Students must complete the core courses (18 hours) plus 18 additional hours in Criminal justice in order to:

1. Satisfy criminal justice requirements for a double major

2. Obtain a second degree with a major in criminal justice

3. Obtain two baccalaureate degrees simultaneously (provided requirements for two majors have been completed as certified by the appropriate academic units, and a minimum of 30 appropriate semester hours beyond the requirements of one degree have been earned).

### Minor in Criminal Justice

A five course minor in criminal justice is available to baccalaureate degree-seeking students who are interested in careers in the criminal justice field. The courses that comprise the minor will provide students with the opportunity to relate to the special concerns of law enforcement, corrections, and the judicial systems. The minor is available on both campuses.

#### Requirements

Fifteen semester hours in criminal justice. The classes are to be selected from the following course list.

| | | |
|---|---|---|
| CCJ 3011 | Nature and Causes of Crime | 3 |
| CCJ 3020 | An Overview of Criminal Justice | 3 |
| CCJ 3101 | Law Enforcement Systems | 3 |
| CCJ 3271 | Criminal Procedure | 3 |
| CCJ 3290 | Judicial Policy Making | 3 |
| CCJ 3291 | Judicial Administration - Criminal | 3 |
| CCJ 3300 | Correctional Philosophy, Theory and Practice | 3 |
| CCJ 3302 | Correctional Treatment Programs | 3 |
| CCJ 3320 | Community Based Treatment | 3 |
| CCJ 3341 | Offender Counseling | 3 |
| CCJ 3450 | Institutional Organization and Administration | 3 |
| CCJ 3460 | Human Resources in Criminal Justice | 3 |
| CCJ 3461 | Developing Interpersonal Communication | 3 |
| CCJ 3470 | Criminal Justice Planning | 3 |
| CCJ 3501 | Juvenile Delinquency, Prevention, and Control | 3 |
| CCJ 3700 | Methods of Criminal Justice Research | 3 |
| CCJ 3934 | Contemporary Issues in Criminal Justice | 3 |
| CCJ 4032 | Crime and the Media | 3 |
| CCJ 4130 | Police and the Community | 3 |
| CCJ 4252 | Criminal Justice and the Constitution | 3 |
| CCJ 4280 | Law and Criminal Justice | 3 |
| CCJ 4282 | Legal Issues in Corrections | 3 |
| CCJ 4331 | Probation, Parole, and Community Programs | 3 |
| CCJ 4440 | Administration of Correctional Institutions | 3 |
| CCJ 4453 | Methods of Institutional Change | 3 |
| CCJ 4462 | Human Relations Training | 3 |
| CCJ 4630 | Criminal Justice: The International Perspective | 3 |
| CCJ 4661 | Terrorism and Violence in Criminal Justice | 3 |
| CCJ 4662 | Criminal Justice and the Minority Community | 3 |
| CCJ 4663 | Women, Crime, and the Criminal Justice System | 3 |

## Course Descriptions

#### Definition of Prefixes

CCJ-Criminology and Criminal Justice.

**CCJ 3011 The Nature and Causes of Crime (3).** Issues involved in defining, measuring and explaining crime. The course focuses on patterns and trends in crime and the extent to which current theories explain those patterns and trends.

**CCJ 3020 An Overview of Criminal Justice (3).** An in-depth survey/overview of the process of criminal justice focusing on that process as a system and the different models by which the system can be viewed. Focus will be on the role and interrelationship of the various components of the system.

**CCJ 3101 Law Enforcement Systems (3).** A study of the American police system that examines the origins, functions, and operations of policing modern society.

**CCJ 3121 Introduction to Crime Prevention (3).** To provide the student with the understanding of the scope and ac-

tivities involved in crime prevention functions and its relationship to the total protection of the individual in society and the CCJ system.

**CCJ 3271 Criminal Procedure (3).** An in-depth study of the 4th through 8th Amendments of the Constitution, and their impact on the criminal justice process.

**CCJ 3290 Judicial Policy Making (3).** Analysis of the Federal and State judicial systems and their impact upon legal, social, and political environments. Emphasis shall be placed upon the roles of the prosecution, defense, and the judiciary in the processing of cases through the court system.

**CCJ 3291 Judicial Administration-Criminal (3).** Historical and contemporary overview of the concepts of court administration, organization, management, and delivery of court services. Primary emphasis shall be upon judicial roles, practices, decision-making and accountability. Within this framework, this course focuses upon an in-depth consideration to both the federal and state court systems.

**CCJ 3300 Correctional Philosophy, Theory and Practice (3).** Critical analysis of contemporary correctional philosophy, theory and practice. Prisons, probation, parole, work-release, halfway house, community based corrections programs, and other practices are examined historically and in their current settings.

**CCJ 3220 Community Based Treatment (3).** An examination of the various pre-trial and post-trial community based treatment and supervision programs. Emphasis will be placed on the impact of these programs on the criminal justice system and the offender.

**CCJ 3302 Correctional Treatment Programs (3).** Study of the types of treatment programs and services that are provided to offenders in correctional institutions, with an emphasis on operational problems and the overall effectiveness of these programs.

**CCJ 3341 Offender Counseling (3).** The nature and function of counseling and casework in various correctional settings, including the theoretical basis for various approaches, individual and group methods of counseling, and the effectiveness and limitations of counseling.

**CCJ 3450 Institutional Organization and Administration (3).** Analysis of internal organizational structure and executive roles and functions in criminal justice agencies. Examines administrative and managerial concepts underlying decision making, policy formulation, operational strategies, and coordination and control procedures.

**CCJ 3460 Human Resources in Criminal Justice (3).** Concepts, issues, and applications of management styles and strategies within an organizational setting; leadership approaches; goal setting; career development and selection; motivation; communications and change; efficiency and effectiveness in measuring individual and group performance.

**CCJ 3461 Developing Interpersonal Communication (3).** The emphasis of this course is on the development of interpersonal communication practices that can be effectively utilized in a helping role and on the job, to improve interaction among employees and the public.

**CCJ 3470 Criminal Justice Planning (3).** Planning methods applicable to criminal justice agencies and crime control on local, state, regional and national levels. Theories, techniques, and applications of planning as a decision making process for criminal justice agencies and entire systems.

**CCJ 3501 Juvenile Delinquency, Prevention and Control (3).** Course focuses upon the nature of juvenile delinquency and on patterns of delinquency historically and currently and the theories that attempt to explain delinquency; a description and critique of the juvenile justice system.

**CCJ 3700 Methods of Criminal Justice Research (3).** A description and critique of research methodologies utilized to study the nature of crime and the operation of the criminal justice system. Focus on the understanding, use and interpretation of research methods and statistical techniques so that students can understand and evaluate published research.

**CCJ 3934 Contemporary Issues in Criminal Justice (3).** An extensive examination of selected contemporary issues in criminal justice. May be repeated.

**CCJ 4032 Crime and the Media (3).** An examination of the role of the media in reporting crime and the extent to which media coverage of crime and the criminal justice system impacts the commission of crimes and the operation of the system.

**CCJ 4130 Police and the Community (3).** Relationships between the police and the community with emphasis upon the police role in managing areas of tension and potential conflict, such as the problems of racial/ethnic minorities or civil disobedience.

**CCJ 4252 Criminal Justice and the Constitution (3).** A case law study of constitutional issues as they relate to the administration of criminal justice; emphasis on the establishment of case precedent and its impact upon the Criminal Justice System.

**CCJ 4280 Law and Criminal Justice (3).** An analysis of historical and contemporary legal dilemmas confronting the criminal justice system. Existing categories of law, sanctions, legal theories, and schools of jurisprudence shall be reviewed to assist practitioner in decision making and problem resolution.

**CCJ 4282 Legal Issues in Corrections (3).** An analysis of contemporary legal decisions regarding the rights and responsibilities of prisoners, correctional administrators, and correctional officers. Emphasis shall be placed upon legal problems involved in pre-sentence investigations, parole, incarceration, and loss and restoration of civil liberties.

**CCJ 4331 Probation, Parole and Community Programs (3).** History, organization, administration, and effectiveness of probation, parole and community programs for criminal offenders.

**CCJ 4440 Administration of Correctional Institutions (3).** Theories and techniques of administering correctional institutions; planning and decision making; correctional law; security and custody, physical plant, and inmate programs; the social structure of the prison community and inmate social systems.

**CCJ 4453 Methods of Institutional Change (3).** A critical examination and analysis of external factors influencing the administration of justice; discussion of the impacts of public perceptions and attitudes, social values, political climate, legal constraints, and organized social movements upon all levels of criminal justice.

**CCJ 4462 Human Relations Training (3).** An experienced based course that will prepare selected students to present human relations training programs in criminal justice agencies.

**CCJ 4630 Criminal Justice: The International Perspective (3).** A comparative analysis of three types of criminal justice: common law systems (e.g., the U.S.); civil law systems (e.g., Germany); and socialist law systems.

**CCJ 4640 Organized Crime (3).** Historical development of organized crime in the U.S.; defining "organized crime" from U.S. and international perspective; patterns of criminal activity; critique of police and prosecutorial efforts to curb organized crime.

**CCJ 4660 Crime and the Schools (3).** Nature and extent of crimes committed against students, faculty and schools (arson, vandalism); patterns of drug abuse in the schools; characteristics of offenders and etiology of crime in the schools; description and critique of efforts by schools and juvenile justice system to curb crime in the schools.

**CCJ 4661 Terrorism and Violence in Criminal Justice (3).** The nature and causes of terrorism within the western world; analysis of particular terrorist groups focusing on their cultural background and objectives; critique of political, military, and law enforcement efforts to curb terrorism.

**CCJ 4662 Criminal Justice and the Minority Community (3).** Patterns and trends in victimization and offending by different racial/ethnic groups; explanations for racial/ethnic variations in offending and victimization; definitional issues involved in terms "racism", "prejudice", etc.; extent of discrimination/disparity at various points of the criminal justice system.

**CCJ 4663 Women, Crime and the Criminal Justice System (3).** Women as deviants, criminals, victims, and professionals in the criminal justice system.

**CCJ 4752 Introduction to Legal Research (3).** This course is designed to introduce students to basic legal research methods for use in a criminal justice agency or private para-professional setting. The reporter systems, shepards citations, federal and state, digest, etc. shall be emphasized.

**CCJ 4900 Directed Readings in Criminal Justice (3).** Extensive reading and analysis of selected criminal justice literature under faculty supervision. Permission of instructor and Department Director is required prior to course registration. One credit per semester with a 3 credit cumulative maximum.

**CCJ 4910 Independent Research (1-3).** A course designed to provide qualified students with the opportunity to perform meaningful research in areas of criminal justice under the direction of a faculty member. Permission of instructor required (6 credits cumulative maximum).

**CCJ 4940 Field Work and Special Projects (1-12).** A course designed to broaden the experiential base, and application of theoretical content to the criminal justice field. Advisor's approval required. (Pass/Fail grading).

**CCJ 4949 Cooperative Education in Criminal Justice (1-3).** Supervised full time work semester for criminal justice academic majors who demonstrate their interest in and potential for developing practical field agencies experience. Limited to students admitted to Co-op Program with consent of advisor. Prerequisite: Senior academic standing.

## Health Services Administration

**David Bergwall,** *Associate Professor and Director*
**Melissa Ahern,** *Assistant Professor*
**Fred Becker,** *Associate Professor*
**Gloria Deckard,** *Assistant Professor*
**Thomas Dunaye,** *Professor and Associate Dean*
**Burton Dunlop,** *Associate Professor*
**Rosebud Foster,** *Professor*
**Charles Frankenhoff,** *Senior Lecturer*
**Frederick Newman,** *Professor*
**Martha Pelaez,** *Senior Lecturer*
**Max Rothman,** *Senior Lecturer*
**Kris Siddharthan,** *Assistant Professor*
**Vandon White,** *Professor*

The Department of Health Services Administration offers graduate and undergraduate studies leading to Bachelors and Masters degrees in Health Services Administration.

The baccalaureate program provides professional education which typifies the traditional preparation of mid-level and departmental administrators practicing various management functions in community based health care settings.

The management of health services occurs in an environment of organizational and technological change. Administrators charged with executive responsibilities must be grounded in a high degree of formal professional training followed by lifelong learning which fosters their continuous professional growth. Many of the same skills needed for executive management are now also required to provide administrative leadership in staffing, directing, coordinating, and controlling the operational resources of administrative and clinical units in such organizations.

### Health Services Administration Programs

The Bachelor of Health Services Administration (BHSA) qualifies students for entry-level management positions in health services delivery organizations. The program provides professional education for administrative occupations in various health care settings. The degree also prepares individuals for further study in health services administration. It is an excellent career development pathway for persons licensed in clinical health and medical care professions but lacking an undergraduate degree.

### Bachelor of Health Services Administration

#### Admissions Requirements

Students seeking admission into the bachelor's program must meet the following minimum requirements:

1. An Associate in Arts degree or its equivalent (e.g., Associate in Science) in lower-division coursework (60 semester hours) completed in the first two years of preparation at an accredited college or university, with a minimum 2.0 cumulative grade point average.

2. The maximum of lower-division transfer credits is 60 semester hours. Upper division credit hours from another institution or department may be transferred up to a maximum of 30 semester hours toward the fulfillment of required or elective courses in the program.

3. Admitted applicants must meet all general educational requirements of the University. Students with one deficiency will be admitted and applicants with two or more deficiencies will only be admitted with departmental approval.

4. Any other general admissions requirements of undergraduate programs at the University as found in the catalog of the current academic year.

5. Students who have not completed the admission process may register as Affiliated Students pending admission. A maximum of 15 semester hours taken as an affiliated student can be used toward a degree. Affiliated status does not guarantee admission to the bachelor's program.

To qualify for admission to the program, FIU undergraduates must have met all the lower division requirements including CLAST, completed 60 semester hours, and must be otherwise acceptable into the program.

#### Internship Requirement

Students electing an administrative internship generally begin their internship in the final semester of the degree requirement. If this period of field place-

ment is evaluated by the Department as successful, the student will graduate at the end of that semester provided that all other requirements have been met.

All students must achieve a GPA of 2.5 or higher in all upper-division coursework before they are permitted to enroll in the Administrative Internship (HSA 4850). Students must apply for the internship, be approved and placed in an agency by the Department in the semester before the administrative internship begins.

The Department utilizes the administrative internship as a mechanism in lieu of special arrangements with the University's Office of Cooperative Education.

For further information regarding internship placements, reference should be made to the Department Policy and Procedures Statement on the Administrative Internship.

### Program Requirements

All Department students completing the BHSA are also subject to undergraduate student regulations and degree requirements governed by the policies of the School of Public Affairs and Services, Florida International University, and the State University System. Undergraduate HSA majors must receive a grade of 'C' or higher in all core courses.

Courses are sequenced to enhance the development of competencies as students progress through the curriculum. Students need to pay particular attention to course prerequisites.

**Core courses required of all students: (36)**

**Group 1**

| | | |
|---|---|---|
| HSA 3103 | Health and Social Service Delivery Systems[1] | 3 |
| HSA 3180 | Management for Health Professions[1] | 3 |
| HSA 4194 | Health Care Computer Applications | 3 |
| HSC 4510 | Statistical Methods for Health Care | 3 |

**Group 2**

| | | |
|---|---|---|
| HSA 4110 | Health Care Organization and Administration | 3 |
| HSA 4170 | Health Care Financing and Accounting Management | 3 |
| HSA 4184 | Human Resource Management | 3 |
| HSC 4500 | Principles of Applied Epidemiology | 3 |

**Group 3**

| | | |
|---|---|---|
| HSA 4140 | Program Planning and Evaluation | 3 |
| HSA 4150 | People, Power, and Politics in Health Affairs | 3 |
| HSA 4192 | Health Management Systems Engineering | 3 |
| HSA 4420 | Legal Aspects and Legislation in Health Care | 3 |

**Areas of Specialization (one required)**

Specialization courses should not be taken until students have completed all courses in Group 1 and Group 2.

**Management and Supervision: (9)**

| | | |
|---|---|---|
| HSA 4183 | Applied Management in Health Care Organizations | 3 |
| HSA 4104 | Team Approach to Health Services Delivery | 3 |
| MAR 3023 | Marketing Management | 3 |

(Plus 15 hours of electives)

**Nursing Home Administration (12)**

| | | |
|---|---|---|
| HSA 5225 | Organization and Management in Nursing Home Administration | 3 |
| HSA 5226 | Management in Long Term Care Systems | 3 |
| HSA 5227 | Applied Management in Long Term Care | 3 |
| HSA 5816 | Practicum in Long term Care Management | |

(Plus 12 hours of electives)

**Elective Courses[2]: (12 or 15 semester hours based on specialization)**

| | | |
|---|---|---|
| HSA 4104 | Team Approach to Health Services Delivery | 3 |
| HSA 4113 | Issues and Trends in Health Care Delivery | 3 |
| HSA 4183 | Applied Management in Health Care Organizations | 3 |
| HSA 4905 | Independent Study | 3 |
| HSA 4193 | Automated Management and Information Systems | 3 |
| HSA 4700 | Fundamentals of Health Research Methods | 3 |
| HSA 5455 | Ethical Decision Making in Health Administration | 3 |
| HSA 5935 | Special Topics in Health Services | 3 |
| HSA 4850 | Administrative Internship | 6 |
| HSA 5876 | Administrative Residency in Nursing Home Setting | 6 |

[2]Elective courses may include upper-division courses offered by other University departments with the approval of a Health Services Administration Advisor.

### Non-Degree Seeking Student

Non-degree seeking students who wish to register for 5000-level courses may do so with the permission of the instructor. University regulations pertaining to non-degree seeking status must be observed.

### Academic Warning, Probation and Dismissal

Refer to General Information section.

### Administrative Residency

A three-month administrative residency in a health care organization is offered to all students. Students lacking health services administrative experience are encouraged to complete administrative residency.

The residency is considered an integral part of the educational process. It is designed to provide practical experience with the theories, concepts, and administrative skills the students acquired during the first year of academic study. The residency is normally arranged in an agency or institution compatible with the students area of interest. The student works full-time with the health agency during this period. The faculty supervises the student during this period. During this period, the residency constitutes full-time matriculation in the program and will require payment of regular tuition fees for the field placement courses. Students must apply for the administrative residency, be approved and placed in an agency by the Department the semester before the residency begins. For more information, reference should be made to the Department Policy and Procedure Statement on the Administrative Residency.

## Course Descriptions

**Definition of Prefixes**

HSA - Health Services Administration;
HSC - Health Sciences;

**HSA 3103 Health and Social Service Delivery Systems (3).** Students examine the history and current functions of health and social services delivery systems in the United States. Focus is on the components, their interaction and internal/external controls.

**HSA 3123 Mental Health and Mental Retardation (3).** The student will examine the community mental health services and services for the mentally retarded from a historical, policy, legislative, and systems perspective.

**HSA 3180 Management for the Health Professions (3).** Fundamental theories,

principles, and concepts of management are surveyed to prepare the student for a middle-management position in health care. Case studies are utilized for practical application.

**HSA 4104 Team Approach to Health Service Delivery (3).** Team formation, structure, composition, maturity, growth, and the process are identified. Team management in health facilities are discussed. Prerequisite: HSA 3180 or permission of instructor.

**HSA 4110 Health Care Organization and Administration (3).** U.S. health care organizations are examined from a systems viewpoint focusing on macro and micro systems and corporate hospital management. Prerequisite: HSA 3180 or permission of instructor.

**HSA 4113 Issues and Trends in Health Care Delivery (3).** Issues and trends in policy questions involving health care organizations, financing, quality controls, and delivery of services are addressed.

**HSA 4140 Program Planning and Evaluation (3).** Basic concepts of planning and evaluation as the fundamental tools of program design and development are examined. Prerequisites: HSC 4510, HSA 4194, or permission of instructor.

**HSA 4150 People, Power and Politics in Health Affairs (3).** Community power structures are analyzed as to their function in politics and decisions governing health care. Health professional's role is studied with respect to the political process in health care. Prerequisites: HSA 3180, HSA 3103, or permission of instructor.

**HSA 4170 Health Care Financial and Accounting Management (3).** Basic accounting and department level financial management methods and procedures are taught at the supervisory level of health care institutions. Prerequisite: HSA 4194, HSA 3180 or permission of instructor.

**HSA 4183 Applied Management in Health Care Organization (3).** Management theory and principles are examined in their application to the administrative process. Case studies are emphasized to illustrate operational conditions found in health care settings. Prerequisites: HSA 3180, HSA 4110, or permission of instructor.

**HSA 4184 Human Resources Management and Supervision (3).** The role of health care supervisors is examined with respect to interviewing, performance appraisal, disciplining, counselling, job orientation, in-service education and responsibilities. Prerequisites: HSA 3180 or permission of instructor.

**HSA 4192 Health Management Systems Engineering (3).** Introduction to health systems analysis and application of industrial engineering techniques including work systems, job analysis, space utilization, inventory control, and traffic patterns are studied. Prerequisite: HSA 3180, HSA 4110, or permission of instructor.

**HSA 4193 Automated Management and Information Systems (3).** The analysis, design, and installation of management information systems in health care organizations is studied. Evaluation of computer systems from several perspectives are examined. Prerequisite: HSA 4192 or permission of instructor.

**HSA 4194 Health Care Computer Applications (3).** Computer applications for administrative analysis of various patient care, financial and program data typically found in health care is studied with design, interface, and data structures.

**HSA 4420 Legal Aspects and Legislation in Health Care (3).** Corporate structure and legal liabilities of health care institutions and professionals is studied from a local, state, and federal regulatory position. Prerequisites: HSA 4110, HSA 4150, or permission of instructor.

**HSA 4700 Fundamentals of Health Research Methods (3).** Introduction to health research method's tools including literature research, research report analysis covering research design, and data analysis and reporting writing are examined and practiced. Prerequisites: HSC 4510, HSC 4500, or permission of instructor.

**HSA 4850 Administrative Internship (6).** The student who has completed all required upper division course work is provided an opportunity to observe and engage in administrative practice in a health care setting. Prerequisite: Completion of all curriculum required course work and approval of the coordinator.

**HSA 4905 Undergraduate Independent Study (1-3).** Students take part in in-depth research or an action-oriented project under the supervision of their faculty advisor. Preparation and approval of the content must be made one semester in advance. Prerequisite: Permission of faculty advisor.

**HSA 5225 Organization & Management in Nursing Home Administration (3).** Long term care institution organization and management are studied. Management implications of the social, economic, financial, and regulatory environment of nursing homes are examined. Prerequisite: HSA 5226.

**HSA 5226 Management of Long Term Care Systems (3).** Organizational, financial, and policy issues in the management of long term care systems in the U.S. with special emphasis on State of Florida. Prerequisites: HSA 3180, HSA 4110.

**HSA 5227 Applied Management in Long Term Care (3).** Survey of theories of gerontic care for understanding the aging process. Focus is on the application of knowledge of the aging process to management and care giving in nursing homes. Prerequisite: HSA 5226. Corequisite: HSA 5225.

**HSA 5455 Ethical Decisions in Health Services Administration (3).** This course will study ethical principles as they apply to areas of management, supervision and clinical practice in the delivery of health care. Emphasis is on managerial decision-making. Prerequisites: HSA 5125, HSA 6185.

**HSA 5816L Practicum in Applied Management in Long Term Care (3).** Students will spend 180 hours in supervised practice in a nursing home setting. They carry out managerial responsibilities related to the administration of the facility.

**HSA 5876L Administrative Residency in Nursing Home Setting (6).** 480 hours of supervised practice in a selected nursing home. To provide experience in organization and management within the nursing environment. Prerequisites: HSA 5816, HSA 5225, HSA 5226, HSA 5227.

**HSA 5935 Special Topics Seminar in Health Services (3).** Students investigate topics of interest in health care services through lectures by the faculty and guest speakers. May be repeated. Prerequisite: Permission of faculty advisor.

**HSC 4202 Principles and Programs in Public Health (3).** Analysis of public health programs and planning is studied. Public health history and philosophy focusing on a broad environmental and epidemiological problems are examined. Prerequisites: HSA 3103,, or permission of instructor.

**HSC 4500 Principles of Applied Epidemiology (3).** Methods and techniques used by epidemiologists investigating the distribution and causes of diseases are studied. A holistic approach to princi-

ples of disease surveillance and control is studied.

**HSC 4510 Statistical Methods for Health Care** (3). Basic statistics and quantitative analysis are introduced to students for application with clinical and supervisory management problems encountered in health care settings. Prerequisite: College algebra or equivalent.

## Public Administration

**Harvey Averch,** *Professor and Director*
**Keith W. Baker,** *Associate Professor*
**James Carroll,** *Professor*
**Milan Dluhy,** *Professor of Public Administration and Social Work*
**Howard Frank,** *Assistant Professor*
**Jean-Claude Garcia-Zamor,** *Professor*
**Donald Klingner,** *Professor*
**Ralph G. Lewis,** *Associate Professor*
**Manny Lorenzo,** *Instructor*
**Stephen C. Loveless,** *Associate Professor*
**Carmen Mendez,** *Instructor*
**Robert Meyers,** *Assistant Professor*
**Allen Rosenbaum,** *Professor and Dean*
**Barbara Yarnold,** *Assistant Professor*

### Bachelor of Public Administration

The Bachelor of Public Administration (BPA) degree is offered for students interested in beginning a public service career upon completion of their undergraduate work and for those who wish to continue in public administration at the graduate level.

### Admission Requirements

A student who has completed an Associate in Arts degree at a Florida public community college or has earned 60 semester hours of college credit at any other accredited institution at an acceptable performance level.

Students with an Associate in Science degree or 60 semester hours will be accepted but must complete the General Education requirements before the bachelor's degree can be awarded.

To qualify for admission to the program, FIU undergraduates must have met all the lower division requirements including CLAST, completed 60 semester hours, and must be otherwise acceptable into the program.

### Lower Division Preparation

It is recommended that applicants complete the Associate in Arts degree (60 semester hours) in the lower division and the General Education course requirements, including one course in American Government and Introductory Algebra or Statistics.

### Upper Division Program

Students are required to complete:

1. Seven core courses.

2. Four courses in an administrative area of concentration to be taken within the Department.

3. Four elective courses relevant to the student's program of study. These courses may be taken in other departments but must be approved by an advisor.

4. Five general electives.

*Note:* Students must earn a grade of 'C' (2.0) or higher in each of the seven core courses, four administrative area courses, and four concentration related elective courses. A grade of 'C-' or below must be repeated.

**Core Courses:** (21 semester hours)

| | | |
|---|---|---|
| PAD 3034 | Public Policy and its Administration | 3 |
| PAD 3104 | Organization and Administrative Theory | 3 |
| PAD 3702 | Quantitative Techniques for the Public Sector | 3 |
| PAD 4024 | Concepts and Issues in Public Administration | 3 |
| PAD 4223 | Public Sector Budgeting | 3 |
| PAD 4414 | Personnel Skills for Administrators | 3 |
| PAD 3438 | Communication Skills for Public Administrators | 3 |

*Note:* Students who have not completed an approved introductory Public Administration course as part of their Lower Division preparation must take PAD 3002 Introduction to Public Administration, as an additional core requirement replacing one general elective.

**Administrative Area of Concentration Courses:** (12 semester hours)

One course must be taken from each of the following skill levels.

**1. Political, Legal, Social, and Economic Contexts:**

| | | |
|---|---|---|
| PAD 3033 | Administrators and the Legislative Process | 3 |
| PAD 3834 | International Comparative Administration | 3 |
| PAD 4603 | Administrative Law | 3 |

**2. Individual, Group, and Organizational Dynamics:**

| | | |
|---|---|---|
| PAD 3430 | Personal Growth and Administrative Development | 3 |
| PAD 3413 | Organizational and Group Processes | 3 |
| PAD 4103 | Politics of Administrative Organization | 3 |
| PAD 4432 | Administrative Leadership and Behavior | 3 |

**3. Policy and Analytic Skills:**

| | | |
|---|---|---|
| PAD 4103 | Politics of Administrative Organization | 3 |
| PAD 4432 | Administrative Leadership and Behavior | 3 |

**4. Administration:**

| | | |
|---|---|---|
| PAD 3804 | Government and Administration of Metropolitan Areas | 3 |
| PAD 3834 | International Comparative Administration | 3 |

**Concentration Related Electives:** (12 semester hours)

Four additional courses must be taken but may be completed within or outside the Department. Those courses selected must be approved by the Department as being related to the student's program of study. These may be additional courses in the Department or they may be outside the department including courses that constitute part of a minor or a certificate program in another department. Such a minor or certificate program should be relevant to the chosen administrative area of concentration.

*Note:* Students who have not had employment experience relevant to public sector organizations will be encouraged to complete an internship in an approved public agency as one of the four area of concentration related courses.

**Additional Electives:** (15 semester hours)

Five courses will consist of general coursework to be completed outside the Department. Students choosing a minor or a certificate program for their concentration-related electives may complete those program requirements as general electives for the BPA, if necessary.

### Minor in Public Administration

A five-course minor in Public Administration is available to baccalaureate degree-seeking students who are interested in careers in public management. The courses that comprise this minor will provide students with the opportunity to develop specialized skills in such areas as urban administration, organizational change, personnel management, and budgeting and financial management. The minor is available on both campuses.

**Requirements**

Fifteen semester hours in Public Administration. Classes are to be selected from the following course list:

| | | |
|---|---|---|
| PAD 3033 | Administrators and the Legislative Process | 3 |
| PAD 3034 | Public Policy and Its Administration | 3 |
| PAD 3104 | Organization and Administrative Theory | 3 |
| PAD 3413 | Organizational Group Processes | 3 |
| PAD 3430 | Personal Growth and Administrative Development | 3 |
| PAD 3702 | Quantitative Techniques for the Public Sector | 3 |
| PAD 3804 | Government and Administration of Metropolitan Areas | 3 |
| PAD 3834 | International Comparative Administration | 3 |
| PAD 4024 | Concepts and Issues in Public Administration | 3 |
| PAD 4040 | Public Values, Ethics and Morality in Changing Environment | 3 |
| PAD 4103 | Politics of Administrative Organization | 3 |
| PAD 4223 | Public Sector Budgeting | 3 |
| PAD 4414 | Personnel Skills for Administrators | 3 |
| PAD 4432 | Administrative Leadership and Behavior | 3 |
| PAD 4603 | Administrative Law | 3 |
| PAD 5041 | Values and Technology in Modern Society | 3 |
| PAD 5256 | Public Economics and Cost Benefit Analysis | 4 |
| PAD 5427 | Collective Bargaining in the Public Sector | 3 |
| PAD 5435 | Administrator and the Role of Women | 3 |
| PAD 5443 | Public Administrator and Media Relations | 3 |

## Course Descriptions

**Course Definitions**

PAD - Public Administration

**PAD 3002 Introduction to Public Administration (3).** The course will provide an overview of the field of public administration by focusing on its development and importance in modern government operations. The course will also review operation of government at local, state, and federal levels.

**PAD 3033 Administrators and the Legislative Process (3).** A study of executive-legislative interactions; the impact of legislation and legislative processes on administrative policy decision-making and implementation; the influence of administration on the legislating process.

**PAD 3034 Public Policy and Its Administration (3).** Examines the formulation, implementation, and evaluation of governmental efforts at federal, state, and local levels.

**PAD 3104 Organization and Administrative Theory (3).** Historical survey of theories of public organization and of contemporary and emerging theories and management issues. With special attention to the role of bureaucratic theory and behavior. Case investigation of bureaucratic experience in federal, state and local levels will be conducted.

**PAD 3413 Organizational Group Processes (3).** The impact of various organizational climates, tasks, roles, and reward systems, on the behavior of both the individuals and groups of employees in public organizations. Particular attention is given to alienation and motivation in job effectiveness and Public Service.

**PAD 3430 Personal Growth and Administrative Development (3).** The administrator as a person. Development of interpersonal skills. Self evaluation and career planning. Training and education for the public service sector.

**PAD 3438 Communication Skills for Public Administrators (3).** Designed to enable students to develop oral and written skills required to communicate effectively in a public organization setting.

**PAD 3702 Quantitative Techniques for the Public Sector (3).** Quantitative techniques useful to public administration, non-parametric techniques, probability concepts, and decision techniques are presented, as well as concepts underlying the use of data systems.

**PAD 3804 Government and Administration of Metropolitan Areas (3).** An intensive analysis of administrative problems in large complex urban areas encompassing many political entities. Examines overlapping relations among municipalities with special attention given to Dade County as well as current trends in public management and future directions for change.

**PAD 3834 International Comparative Administration (3).** This course is an introduction to a wide range of scholarly and practical 'applied' interests. Emphasis is on institution-building and development administration, particularly within the Third World countries.

**PAD 3949 Cooperative Education (3).** Supervised work experience in public or quasi-public organization. Placement is made through the Office of Cooperative Education. Prerequisites: Completion of required courses in public administration and consent of department Director required.

**PAD 4024 Concepts and Issues in Public Administration (3).** The function of administrative institutions in society. The growth of administration through the bureaucratic model both as an art and a science. Contemporary and comparative forms and theories of organization. Responsibilities of public servants.

**PAD 4040 Public Values, Ethics and Morality in Changing Environment (3).** Theories of value: ethical systems and their influence on administration, behavior and process, the administrator as an ethical actor: value conflict and resolution; the philosophical basis of American thought.

**PAD 4103 Politics of Administrative Organization (3).** The role of political processes in relationship to public organizations and the types of intra- and inter-organizational politics which are unique to public organizations. Effects of these political processes upon organizational performance and their role in promoting or thwarting organizational change.

**PAD 4223 Public Sector Budgeting (3).** The theory and practice of various approaches to budgeting, including time-item, performance, PPBS budgeting. Special emphasis on the role of the budget in shaping the program and performance and policy direction of public organizations.

**PAD 4414 Personnel Skills for Administrators (3).** The general nature of public personnel administration; the development of the civil service system; concepts and issues currently applicable at the federal, state, and local levels of government.

**PAD 4432 Administrative Leadership and Behavior (3).** Designed to expose students to a systematically related set of concepts for diagnosing human behavior in organizations; and to establish a positive value for the analysis of problems involving people, structure, environment, task technology, and situational climate.

**PAD 4603 Administrative Law (3).** Surveys the principles of law from the perspective of the public administrator; administrative procedure; procedural due process; delegation of legislative

power; regulatory administration; conflict-of-interest statutes, etc.

**PAD 4905 Independent Study in Public Administration (1-6).** (Normally 3 credit hours) Individual conferences, supervised readings; reports on personal investigations; and similar undertakings. Prerequisites: Completion of required courses in public administration is expected. Consent of faculty sponsor and Department Director required.

**PAD 4940 Public Administration Internship (3-6).** (Normally 3 credit hours) Supervised work experience in a public or quasi- public organization. Involves a variety of professional and technical job duties depending on the agency. Prerequisites: Completion of required courses in public administration is expected. Consent of internship coordinator and department director required.

**PAD 4949 Cooperative Education (3).** Supervised work experience in public or quasi-public organization. Placement is made through the Office of Cooperative Education. Prerequisites: Completion of required courses in public administration, PAD 3949, and consent of department Director required.

**PAD 5041 Values and Technology in Modern Society (3).** Surveys personal and societal value assumptions in the context of the technological society. Examines organizational-societal value structures, and the ways in which technology creates rapid change and new alternatives in values. Also interrelationship of the past, present and future is explored, through futurism and forecasting techniques.

**PAD 5043 Government and Minority Group Relations (3).** Explores the pressing contemporary issue of the relationship between government and minorities. Examines the clash between established institutional values and minority group values, and surveys remedial programs aimed at dealing with the problem. Comparative case studies will be used to analyze public agencies' internal relations with minorities (recruiting, selection, etc.), as well as their different responses to the minority groups they serve.

**PAD 5256 Public Economics and Cost Benefit Analysis (4).** This course provides the quantitative and qualitative tools and case material to solve allocation problems in the public sector. A rigorous introduction to applied microeconomic theory is provided as well as an introduction to welfare economics. Market and government failure are analyzed as are the public alternatives available. The economics of innovation is contrasted to the benefit-cost analysis, cost effectiveness analysis and systems analysis are presented. The ethics of applied practice are discussed via actual cases and the important skills of communicating with decision makers are taught. At the end of the course, every student presents orally their analysis of an important real world allocation problem or an actual cost-effectiveness analysis drawn from their own work situation or experience.

**PAD 5416 Social Equity and Human Resource Management (3).** The course deals with the human resource management issues arising from equity and affirmative action requirements in the workplace.

**PAD 5427 Collective Bargaining in the Public Sector (3).** The course deals with the nature and implications of collective bargaining for managers and employees in (and students of) public organizations. The course emphasizes similarities and differences between the private and public sectors, as they apply to collective bargaining.

**PAD 5435 Administrator and the Role of Women (3).** The course is designed for women and men who are interested in moving into management positions, or who have done so and want to broaden their understanding of the changing role of women. Classes will allow for experimental as well as academic exploration of the issues. The course will also explore design, implementation, and evaluation of affirmative action programs.

**PAD 5443 The Public Administrator and Media Relations (3).** Surveys the government-mass communication media relationship, and then concentrates on the ways in which public managers handle media relations. Emphasis throughout is placed on questions of information-handling unique to public organizations, involving, for example, adherence to Florida's Sunshine Law and the Federal Freedom of Information Act.

**PAD 5460 Productivity Improvement (3).** Provides measures to improve organizational and worker productivity using applied behavioral science.

**PAD 5616 Contracting and Managing Third Party Governments (3).** Analyzes the legal foundations, administrative and economic characteristics of government instrumentalities as they are used to pursue public policy. Analyzes how and why different combinations of instrumentalities are used in different policy areas.

**PAD 5716 Management Support Systems in Public Organizations (1).** The course examines a variety of computer-based management support applications used in public sector organizations. It also explores design and implementation issues endemic to the public sector.

**PAD 5716L Information Systems for Public Organizations (1).** This course will provide an overview of microcomputer and mainframe skills required for substantive coursework in personnel, budgeting, and other core public sector functions.

**PAD 5934 Contemporary Issues in Public Administration (1-6).** An analysis of major conceptual issues currently facing public administrators. May be repeated.

## Social Work

**Scott Briar,** *Professor and Director*
**L. Yvonne Bacarisse,** *Associate Professor and Associate Dean*
**Milan J. Dluhy,** *Professor of Public Administration and Social Work*
**James E. Garrett,** *Associate Professor*
**Manuel R. Gomez,** *Assistant Professor*
**Mary Helen Hayden,** *Assistant Professor and Director of Field Instruction*
**Katherine Hooper Briar,** *Professor*
**Michael Kolevzon,** *Professor*
**Rosa Jones,** *Associate Professor*
**Monte Koppel,** *Professor*
**Sanford Kravitz,** *Distinguished Professor of Public Affairs*
**Magaly Queralt,** *Associate Professor*
**Florence Safford,** *Associate Professor*
**Betsy Smith,** *Associate Professor*
**Karen Sowers-Hoag,** *Assistant Professor and Coordinator Undergraduate Program*

The Department of Social Work offers graduate and undergraduate studies leading to the Master's and Bachelor's degrees in Social Work.

This profession requires a high degree of knowledge, skill, and dedication. The desire and ability to work effectively with people and to help solve social problems; demands a scientific understanding of society and human behavior; skills of social work practice; and identification with values of the profession.

## Bachelor of Science in Social Work

The program offers an integrated educational experience that combines the theoretical and the practical. It is designed to prepare the student for generalist practice as a beginning professional social worker, for entrance into a graduate school of social work, and for participation in society as an informed citizen.

The four semester program includes a sequence of academic courses and field instruction under qualified supervision in social agencies in South Florida.

The program is accredited by the Council on Social Work Education.

### Lower Division Preparation

The student desiring to major in Social Work must have completed the Associate in Arts degree at a Florida public community college, or equivalent work from an accredited institution.

#### Required Courses

Before admission to the Social Work program the student must complete college-level courses in biology (including coverage of Human Biology) and statistics and 12 semester hours in the social and behavioral sciences.

To qualify for admission to the program, FIU undergraduates must have met all the lower division requirements including CLAST, completed 60 semester hours, and must be otherwise acceptable into the program.

For additional information regarding the undergraduate social work program of study and degree program requirements, contact the department directly.

### Upper Division Program (60)

**Required Courses:** (45)

| | | |
|---|---|---|
| SOW 3113 | Dynamics of Human Behavior in the Social Environment I | 3 |
| SOW 3122 | Dynamics of Human Behavior in the Social Environment II | 3 |
| SOW 3232 | Social Welfare Policy and Services I | 3 |
| SOW 3233 | Social Welfare Policy and Services II | 3 |
| SOW 3302 | Introduction to Social Work | 3 |
| SOW 3313 | Methods of Social Work Practice I | 3 |
| SOW 3403 | Social Work Research | 3 |
| SOW 4322 | Methods of Social Work Practice II | 3 |
| SOW 4332 | Methods of Social Work Practice III | 3 |
| SOW 4511 | Field Experience I | 8 |
| SOW 4512 | Field Experience II | 8 |
| SOW 4522 | Integrative Field Seminar I | 1 |
| SOW 4523 | Integrative Field Seminar II | 1 |

Electives: With approval of the faculty advisor 15

*Remarks*: Students should be aware that courses in this program are sequenced. Students must check with their advisors for pre- and corequisite courses. A grade of 'C' or higher in all courses required for the major is necessary for graduation. A passing grade in field courses is required for continuation in the program. Field courses cannot be repeated.

## Minor in Social Welfare

A five-course minor in social welfare is available to baccalaureate degree-seeking students who are interested in careers in the human services field or who wish to study how common human needs are addressed within social welfare programs. The courses that comprise the minor will provide students with the opportunity to relate to the special concerns of our region, including poverty, crime and delinquency, child abuse and neglect, and family instability. The minor is available at University Park and North Miami Campus.

| | | |
|---|---|---|
| SOW 3113 | Dynamics of Human Behavior in the Social Environment I | 3 |
| SOW 3122 | Dynamics of Human Behavior in the Social Environment II | 3 |
| SOW 3232 | Social Welfare Policy and Services I | 3 |
| SOW 3233 | Social Welfare Policy and Services II | 3 |
| SOW 3302 | Introduction to Social Work[1] | 3 |
| SOW 3350 | Techniques of Interviewing | 3 |
| SOW 3313 | Methods of Social Work Practice I | 3 |
| SOW 3801 | Self-Awareness and Self-Modification for Practice | 3 |
| SOW 4272 | Social Welfare: Cross-Culture Comparisons | 3 |
| SOW 4361 | Behavioral Approaches to Social Work Practice | 3 |
| SOW 4654 | Child Welfare | 3 |
| SOW 4658 | Permanency Planning in Child Welfare Services | 3 |
| SOW 4684 | Professional Values in the Human Services | 3 |
| SOW 5109 | Crises in the Lives of Women | 3 |
| SOW 5605 | Medical Social Work | 3 |
| SOW 5641 | Understanding the Processes of Aging | 3 |
| SOW 5665 | Animal Assisted Treatment for Social Work | 3 |
| SOW 5689 | Social Work Practice with Sexual Problems | 3 |
| SOW 5932 | Seminar in Social Work | 3 |

[1]This course is required for the minor in social welfare. The remaining 12 semester hours are to be selected from the social work courses listed above.

## Course Descriptions

### Definition of Prefixes

SOW - Social Work.

**SOW 3113 Dynamics of Human Behavior in the Social Environment I (3).** Study of bio-psycho-socio-cultural factors (including racial, ethnic, and gender variables) affecting human development and functioning in relation to social systems. Prerequisites: 12 semester hours of college-level courses in the social and behavioral sciences and a college-level course in biology (including coverage of human biology).

**SOW 3122 Dynamics of Human Behavior in the Social Environment II (3).** Study of the life cycle and of client problems frequently encountered by social practitioners from a bio-psychological and socio-cultural perspective with attention to racial/ethnic and gender variables. Prerequisite: SOW 3113 or equivalent.

**SOW 3232 Social Welfare Policy and Services I (3).** This course considers the major social welfare programs in the United States: how they emerged and developed, and how they operate today. Analysis of financial resources, decision-making processes, and structure of delivery systems serves as a basis for understanding policy assessment. Corequisite: SOW 3302 or equivalent

**SOW 3233 Social Welfare Policy and Services I (3).** This course examines the frameworks and methods used to analyze social welfare policy and programs. Special attention is paid to current policy issues in the Social Welfare system and strategies that can be used to achieve policy change. Prerequisites: SOW 3232 and SOW 3302 or equivalent.

**SOW 3302 Introduction to Social Work (3).** An overview of the profession of social work within the institution of social welfare. Historical and philosophical

development, field of practice, values, and ethics.

**SOW 3313 Methods of Social Work Practice I (3).** An overview of social work intervention for beginning generalist practice. Generic values, attitudes, processes, and skills in client-worker relationship-building are discussed and analyzed. Case material is utilized to acquaint students with assessment, modes of intervention, goal setting, and implementation. Prerequisites: SOW 3113, SOW 3232, SOW 3302, or equivalents. Corequisite: SOW 3122.

**SOW 3350 Techniques of Interviewing (3).** A competency-based course designed to provide students with basic interviewing skills. Emphasis is on acquisition of interview behavior rather than theory. Audio and videotaping, role-playing, simulations, and micro-counseling training methods will be utilized. Prerequisites: SOW 3113 and permission of instructor.

**SOW 3403 Social Work Research (3).** Introduction to the basic language, methods, and skills of scientific research for beginning social work practice. Problem formulation, literature review, definition of variables, sampling, data collection and analysis, and report writing are addressed. Prerequisite: STA 3013 or equivalent.

**SOW 3801 Self-Awareness and Self-Modification for Practice (3).** An experience oriented course directed toward helping students become aware of their own interpersonal and interpersonal processes and how these may influence their skill and effectiveness as professional helping persons. Emphasis is on personal learning.

**SOW 4272 Social Welfare: Cross-Culture Comparisons (3).** A combination seminar and lecture course in which students will analyze and compare social welfare policy, problems, and programs in various countries. Prerequisite: SOW 3232 or permission of instructor.

**SOW 4322 Methods of Social Work Practice II (3).** This generic skills course is designed to provide students with the theories and techniques of social work practice as applied to small groups and families. Prerequisites: SOW 3122, SOW 3233, and SOW 3313, or equivalents.

**SOW 4332 Methods of Social Work Practice III (3).** Provides an understanding of planned change at the community level from a social work perspective, as well as strategies and methods utilized in community organization practice. Identification of generalist skills and prevalent models of groups and community organization in social work practice. Prerequisites: SOW 4322, SOW 4511, SOW 4522. Corequisites: SOW 4512 and SOW 4523.

**SOW 4361 Behavioral Approaches to Social Work Practice (3).** An introduction to the basics of learning theory as applied to social work settings. A review of principles of cognitive and learning theory applied to generalist practice. Prerequisite: SOW 3113 or permission of instruction.

**SOW 4511 Field Experience I (8).** This is the first 315 clock hour supervised social work practice experience in service to individuals, families, groups, and communities. Placement in an agency or institution is for the purpose of gaining a first-hand awareness of needs and behavioral responses, as well as a knowledge base of expectations, responsibilities, and activities involved in the delivery of social services. This experience facilitates the development of beginning generalist social work skills, and a continually growing awareness of self as a helping person. Majors only. Prerequisites: SOW 3122, SOW 3233, SOW 3302, SOW 3313, and SOW 3403, or equivalents. Corequisites: SOW 4322 and SOW 4522.

**SOW 4512 Field Experience II (8).** This second 315 clock hour supervised social work practice experience enables the student to progress toward a higher level of awareness and understanding of needs and behavioral responses. Generic skills are applied more selectively with increasing interest and proficiency in one or more practice areas. This second placement affords the student an opportunity to become a more effective part of the social service delivery system. Majors only. Prerequisites: SOW 4511, SOW 4322, and SOW 4522. Corequisites: SOW 4332 and SOW 4523.

**SOW 4514 Field Experience III (4 or 8).** This third supervised social work practice experience makes it possible for students to sharpen diagnostic skills and to refine planning and implementation of appropriate helping techniques as these relate to individuals, groups, and/or communities. Majors only. Prerequisites: SOW 4332, SOW 4512, and SOW 4523, or their equivalents.

**SOW 4522 Integrative Field Seminar I (1).** This course is a one-hour seminar, to be taken concurrently with SOW 4511 and SOW 4322, designed to analyze the field experience and integrate theory and practice. It provides an arena for students from various settings to come together in order to provide a richer understanding of social services on all levels. Majors only. Prerequisites: SOW 3122, SOW 3233, SOW 3302, SOW 3313, and SOW 3403, or equivalents. Corequisites: SOW 4322 and SOW 4511.

**SOW 4523 Integrative Field Seminar II (1).** This course is a one-hour seminar to be taken concurrently with SOW 4512, designed to analyze the field experience and integrate theory and practice. It provides an arena for students from various settings to come together in order to provide a richer understanding of social services on all levels. Majors only. Prerequisites: SOW 4322, SOW 4511, and SOW 4522, or equivalents. Corequisites: SOW 4332 and SOW 4512.

**SOW 4654 Child Welfare (3).** Theories and models of intervention with children and adolescents will be examined within the context of the family. The main focus of the course will be on the special diagnostic and treatment skills necessary for the effective intervention with this client population. Prerequisites: SOW 3122 and SOW 3313 or permission of instructor.

**SOW 4658 Permanency Planning in Child Welfare Services (3).** Emphasis on those practice skills needed for implementing permanent plans for children 'at-risk'. Included are intervention strategies for developing contractual arrangements insuring a child's security. Prerequisites: SOW 3122, SOW 3233, SOW 4322, SOW 4654, or permission of instructor.

**SOW 4684 Professional Values in the Human Services (3).** This course is designed to assist students in identifying, exploring, and experiencing the values inherent in professionalism, as they are manifested in the various human service professions. Material will be presented in a didactic and experiential manner with emphasis upon student involvement in the value clarification process. Prerequisite: Senior standing.

**SOW 4905 Individual Study (1-3).** Individually selected program of supervised study related to specific social work issues. Prerequisite: Permission of instructor.

**SOW 5109 Crises in the Lives of Women (3).** An overview of special experiences in the lives of women which might lead women to seek professional assistance. Topics include pregnancy, rape, abortion, childbirth, sex discrimina-

tion, climacteric, widowhood. Prerequisite: Senior or graduate standing.

**SOW 5354 Crisis Intervention in Social Work Practice (3).** This course examines the etiology, structure, theory, and application of crisis intervention in social work practice. It provides assessment criteria for assignment to this form of treatment and techniques for intervention. Prerequisite: Senior or graduate level practice course, or permission of instructor.

**SOW 5605 Medical Social Work (3).** Principles of medical social work required in hospitals and community. Focus on the social worker as part of the health care team, with basic knowledge of medical problems of patients and their families. Prerequisite: Graduate or senior standing.

**SOW 5625 Feminist Therapy in Social Work (3).** Reviews basic principles of feminist therapy and focuses on the application of feminist therapy in clinical social work practice. Prerequisite: Graduate standing or permission of instructor.

**SOW 5635 School Social Work Practice (3).** Designed to assist students in developing knowledge and skills necessary for effective social work practice in school settings. Promotes understanding of SOW practice to improve the functioning of children. Prerequisites: SOW 5342 or permission of instructor.

**SOW 5641 Understanding the Process of Aging (3).** Study of the physical, psychosocial, and cultural factors affecting human development in late life, from a social work perspective. Prerequisites: Graduate or senior standing and permission of instructor.

**SOW 5665 Animal Assisted Treatment for Social Work (3)** An introduction to the human animal bond and animal assisted treatment. There will be illustrations of programs using small animals, horses, and dolphins. Prerequisites: SOW 3313 or SOW 5342 or permission of instructor.

**SOW 5689 Social Work Practice with Sexual Problems (3).** Skills applicable to sex-related concerns encountered in social work practice. Presents theories of the etiology of common sexual problems; explores treatment intervention modalities. Prerequisite: Graduate or senior level practice course or permission of instructor.

**SOW 5710 Chemical Dependency and Social Work (3).** An overview of chemical dependency in the social service delivery system including policy and program approaches, client assessment, treatment techniques and prevention issues. Prerequisites: SOW 4322 or SOW 5342 or permission of instructor.

**SOW 5932 Seminar in Social Work (3).** An exploration of various critical issues of concern to the social work profession. Prerequisite: Graduate or senior standing.

## Certificate Programs

### Law and Criminal Justice Certificate

The Law and Criminal Justice academic certificate is designed to provide legally-conscious students with concepts and information utilized by law professionals. Study shall include casework, procedures, court processes, research methods, and other introductory coursework designed to enhance careers in the legal profession.

#### Admissions

Students must be fully admitted to the Bachelor of Science degree in Criminal Justice or another bachelor degree program.

#### Certificate Award

The Certificate will be awarded upon completion of the required certificate courses and the bachelor degree requirements. The certificate will be posted on the student's transcript at the time the completion of the bachelor degree requirements is posted.

#### Required Criminal Justice Courses

The student shall complete a minimum of 18 semester hours of the following selected criminal justice courses with a minimum grade of "C" in each course. Core criminal justice courses will not count for Criminal Justice majors.

| | | |
|---|---|---|
| CCJ 3271 | Criminal Procedure | 3 |
| CCJ 3290 | Judicial Policy Making | 3 |
| CCJ 3291 | Judicial Administration | 3 |
| CCJ 4032 | Crime and the Media | 3 |
| CCJ 4252 | Criminal Justice and the Constitution | 3 |
| CCJ 4280 | Law and Criminal Justice | 3 |
| CCJ 4282 | Legal Issues in Corrections | 3 |
| CCJ 4752 | Legal Research | 3 |
| CCJ 5216 | Criminal Law | 3 |
| CCJ 5235 | Criminal Procedure | 3 |
| CCJ 5286 | Comparative Law | 3 |

## School of Public Affairs and Services

**Dean** *Allan Rosenbaum*
**Associate Dean** *L. Yvonne Bacarisse*
**Director of Administration and Budget** *Manuel Lorenzo*
**Department Directors:**
**Criminal Justice (Acting)** *Raymond Surette*
**Health Services Administration** *David Bergwall*
**Public Administration** *Harvey Averch*
**Social Work** *Scott Briar*

### Faculty

**Ahern, Melissa, Ph.D.,** *(Florida State University), Assistant Professor, Health Services Administration*

**Askew, Reubin, Law** *(University of Florida), Distinguished Visiting Professor, Public Administration*

**Averch, Harvey, Ph.D.** *(University of North Carolina), Professor and Director, Public Administration*

**Bacarisse, L. Yvonne, M.S.W., A.C.S.W., L.C.S.W.** *(Tulane University), Associate Professor, Social Work and Associate Dean*

**Baker, Keith, Ph.D.** *(University of California), Associate Professor, Public Administration*

**Becker, Fred, Ph.D.** *(University of Oklahoma), Associate Professor, Health Services Administration*

**Bergwall, David, D.B.A.** *(George Washington University), Associate Professor and Director, Health Services Administration*

**Briar, Katharine Hooper, D.S.W., A.C.S.W.** *(University of California, Berkeley), Professor, Social Work and Director, FIU-HRS CYF Professional Development Centre*

**Briar, Scott, D.S.W., A.C.S.W.,** *(Columbia University), Professor and Director, Social Work*

**Carroll, James, Ph.D.** *(Maxwell School, Syracuse University), J. D. (Syracuse University), Professor, Public Administration*

**Clark, Robert S., Ph.D.** *(New York University), Professor, Criminal Justice*

**Deckard, Gloria, Ph.D.** *(University of Missouri), Assistant Professor, Health Services Administration*

**Dluhy, Milan J., Ph.D.** *(University of Michigan), Professor, Public Administration and Social Work, Director, Institute of Government*

**Dunaye, Thomas M. Dr. P.H.** *(U.C.L.A.), Professor, Health Services Administration*

**Dunlop, Burton, Ph.D.** *(University of Illinois), Associate Professor, Health Services Administration, Research Director, Southeast Florida Center on Aging*

**Foster, Rosebud, Ed.D.** *(University of Miami), Professor, Health Services Administration*

**Frank, Howard, Ph.D.** *(Florida State University), Assistant Professor and MPA Coordinator, Public Administration*

**Frankenhoff, Charles, Ph.D.** *(Georgetown University), Senior Lecturer, Health Services Administration*

**Garcia-Zamor, Jean-Claude, Ph.D.** *(New York University), Professor, Public Administration*

**Garrett, James, Ph.D, A.C.S.W.** *(St. Louis University), Associate Professor, Social Work*

**Gelber, Seymour, Ph.D., J.D.** *(Florida State University), Distinguished Visiting Professor of Juvenile Justice, Criminal Justice*

**Gomez, Manuel, D.S.W., L.C.S.W.** *(New York University), Assistant Professor, Social Work*

**Hayden, Mary Helen, M.S.W., A.C.S.W., L.C.S.W.** *(Florida State University), Assistant Professor and Director of Field Instruction, Social Work*

**Jones, Rosa L., M.S.W., A.C.S.W., L.C.S.W.** *(Florida State University), Associate Professor, Social Work*

**Klingner, Donald, Ph.D.** *(University of Southern California), Professor, Public Administration*

**Kolevzon, Michael S., D.S.W.** *(University of California, Berkeley), Professor, Social Work*

**Koppel, Monte H., Ph.D.** *(New School for Social Research), Professor, Social Work*

**Kravitz, Sanford L., Ph.D., A.C.S.W.** *(Brandeis University), Distinguished Professor, Public Affairs*

**Lewis, Ralph G., Ed.D.** *(Harvard University), Associate Professor, Public Administration*

**Lorenzo, Manuel, M.P.A.** *(Florida International University), Instructor, Public Administration*

**Loveless, Stephen C., Ph.D.** *(Syracuse University), Associate Professor, Public Administration and Ph.D. Coordinator*

**Marques, Jose A., M.S.W., A.C.S.W.** *(Barry University), Associate Professor, Criminal Justice*

**Mendez, Carmen, M.P.A.** *(Florida International University), Instructor, Public Administration*

**Meyers, Robert A., J.D.** *(University of Miami), Assistant Professor, Public Administration*

**Newman, Frederick, Ph.D.** *(University of Massachusetts), Professor, Health Services Administration*

**Pelaez, Martha, Ph.D.** *(Tulane University), Senior Lecturer, Health Services Administration, Associate Director, Southeast Florida Center on Aging*

**Queralt, Magaly, Ph.D.** *(University of Miami), Associate Professor, Social Work*

**Rosenbaum, Allan, Ph.D.** *(University of Chicago), Professor, Public Administration and Dean*

**Rothman, Max, J.D.,LLM** *(George Washington University), Senior Lecturer, Health Services Administration, Director, Southeast Florida Center on Aging*

**Safford, Florence, D.S.W.** *(Hunter College), Associate Professor, Social Work*

**Salas, Luis P., J.D.** *(Wake Forest University), Professor, Criminal Justice, Director, Center for the Administration of Justice*

**Shearn, Regina B., Ph.D.** *(Florida State University), Associate Professor, Criminal Justice*

**Siddharthan, Krismaswami, Ph.D.** *(Carnegie-Mellon University), Assistant Professor, Health Services Administration*

**Smith, Betsy A., Ph.D.** *(State University of New York at Buffalo), Associate Professor, Social Work*

**Snow, Robert E., J.D.** *(Florida State University), Associate Professor, Criminal Justice*

**Sowers-Hoag, Karen, Ph.D., A.C.S.W.** *(Florida State University), Assistant Professor, Social Work and Coordinator, Undergraduate Program*

**Surette, Raymond, Ph.D.** *(Florida State University), Associate Professor, and Acting Director Criminal Justice*

**Terry, W. Clinton, Ph.D.** *(University of California), Associate Professor, Criminal Justice*

**White, Vandon E., Ph.D.** *(Purdue University), Professor, Health Services Administration*

**Wilbanks, Willlam, Ph.D.** *(State University of New York), Professor, Criminal Justice*

**Yarnold, Barbara, Ph.D.** *(University of Illinois), J.D. (DePaul University), Assistant Professor, Public Administration*

# Military Programs

## Aerospace Studies

Florida International University, in cooperation with the Department of Aerospace Studies, Air Force Reserve Officer's Training Corps (AFROTC), at the University of Miami, provides an opportunity for selected students to prepare for Air Force commissions while completing degree requirements. Two programs are offered:

1. The Four-Year AFROTC program is comprised of a two-year basic course in Air Force organization and the development of air power, and a two-year advanced course directed toward developing managerial skills and attitudes necessary for appointment as an Air Force officer.

2. The Two-Year AFROTC program (the last two years of the Four-Year program) is available for students in their last four semesters of college following successful completion of a six week summer Field Training course at selected Air Force bases.

In order to complete either program, all Air Force ROTC cadets must complete specified minimum requirements in English composition and mathematical reasoning.

Air Force ROTC scholarships for 2, 2-1/2, 3 and 3- 1/2 years are available to qualified cadets on a competitive basis. The engineering curriculum, coupled with the Air Force ROTC program, requires a minimum of five years to complete degree requirements. Air Force ROTC Cadets must take 16 additional hours in Aerospace studies, along with an Air Force sponsored Summer Training Camp between their sophomore and junior years in college. This allows qualified engineering students to receive four year scholarships (maximum allowed by current legislation) even though already enrolled in college. All scholarship students must obtain at least three hours of college level credit in an Indo-European language (unless waived) in addition to the English and math requirements listed above. Scholarships cover tuition, fees, books, and $100 per month.

Cadets earn two credits for each basic year and six credits for each advanced year. Entry into the basic course entails no military obligation; entry into the advanced course usually leads to extended active duty as an Air Force officer. Call to active duty after graduation may be delayed for selected cadets who plan to attend graduate school.

Cadets are provided with uniforms and textbooks; the cadet corps collects a small activity fee each semester from each cadet to cover corps activities.

Selection for the advanced course is highly competitive. Cadets must be citizens of the highest personal and physical qualifications, chosen for their proven ability to lead.

Applicants who are veterans or who have completed Junior ROTC, may be considered for waiver of the basic course.

Advanced course cadets are paid $100 per month for 20 months. Basic cadets attend one hour of class each week. Advanced cadets attend three hours of class each week, and all cadets are involved in one hour of leadership laboratory each week. All classes are conducted on the University of Miami campus.

AFROTC cadets may participate in orientation flights in military aircraft. For more information, call 284-2870.

### Course Descriptions

**AFR 1101C First Semester Basic (1).** Study of the doctrine, mission and organization of the United States Air Force; U.S. strategic offensive and defensive forces; their mission, function and employment of nuclear weapons.

**AFR 1110C Second Semester Basic (1).** U.S. general purpose and aerospace support forces; the mission, resources, and operation of tactical air forces, with special attention to limited warfare; review of Army, Navy, and Marine general purpose forces.

**AFR 2130C Third Semester Basic (1).** Changing nature of military conflict; factors leading to the development of air power; concepts and doctrine governing the employment of air power.

**AFR 2131C Fourth Semester Basic (1).** How technology has affected the growth and development of air power; the changing mission of the defense establishment, emphasizing the Air Force; how air power has been employed in military operations.

**AFR 3220C Air Force Leadership (3).** Air Force leadership in theory and practice; written and oral communications in the Air Force.

**AFR 3230C Air Force Management (3).** Air Force management in theory and practice; management tools, principles, problem-solving; written and oral communications in the Air Force.

**AFR 4201C The Military Profession and Society (3).** National security forces in contemporary American society.

**AFR 4210C Formulation and Implementation of U.S. Defense Policy (3).** Political, economic and social constraints on the formulation of U.S. defense policy. Technological and international impact upon the overall defense policy-making process. The military justice system.

## Army ROTC Program

The Army Reserve Officers' Training Corps at Florida International University offers a four- year and a two-year Office Training Program leading to a commission as a Second Lieutenant in either the United States Army Reserve or the Regular Army. Depending on the student's academic major his/her desires and the needs of the Army, this commission may be in any one of the Army's branches.

All textbooks, uniforms and equipment are furnished. The only cost is a student activity fee of $5.00 per semester. During the two years of the Advanced Course, the student is paid $100.00 per month for up to ten months during each academic year by the U.S. Government. In addition, one-, two-, and three-year scholarships may be awarded to exceptional students. (For further information contact the Military Science Department.)

The course of instruction emphasizes theoretical and practical leadership. It is divided into Basic (MS I and MS II) and Advanced (MS III and MS IV) Courses. Admission to the Basic Course is open to full-time students who will complete the four-year program prior to their 30th birthday and who are physically qualified. Admission to the Advanced Course is competitive. The Professor of Military Science must approve all applicants. In addition, all advanced students must pass mental and physical examinations and have received credit for the Basic Course. A student who wishes to continue with post-graduate work may be deferred from call to active duty for up to four years after commissioning.

Credit for the Basic Course may be given for prior military service or for participation in three years of Junior ROTC during high school. Credit for the entire Basic Course may be received by attending a six-week Summer Camp at Fort Knox, Kentucky under the Two-Year ROTC Program. Students participating in this camp are paid

approximately $540.00 plus travel costs, lodging, and food.

Additionally, the Army ROTC offers voluntary activity modules to all students. These modules allow the student to receive Military Core Credit Hours (MCCH) for his/her participation. The modules offered are:

**Bushmaster/Raider:** Teaches small unit Ranger/Special Forces tactics, techniques, rappelling, survival, field crafts and leadership.

**Expert Field Cadet:** Teaches basic military skills and leadership. In addition to the above, students can receive Military Supplemental Credit Hours (MSCH) for participation in:

**Rifle Marksmanship:** Training and firing of the .22 caliber rifle. All students fire and are eligible to compete in intercollegiate rifle matches.

**Wargaming:** Teaches the evolution of warfare, strategy, tactics and logistics through the use of wargames such as Blitzkrieg and Squad Leader, as well as through the use of military miniatures and other RPG's.

### Class Hours Required

First- and second-year students attend one hour of class per week. Third- and fourth-year students attend three hours per week. In addition, advanced students attend one six-week Advanced Summer Camp between his/her junior and senior years. Students will receive approximately $800.00 plus food, lodging and travel costs reimbursement for participation in this summer training.

For any additional information concerning the Army ROTC Program, contact the Professor of Military Science at (305) 284-4673.

## Course Descriptions

**MIS 1002 First Year Basic (1).** An orientation of the ROTC program and its objectives; the role and organization of the Army; the fundamentals of leadership and management; leadership development.

**MIS 1300 First Year Basic (1).** Basic operations and tactics of Infantry and Mechanized Infantry as small unit level; military principles of war.

**MIS 2106 Second Year Basic (1)** MIS 2106L Second Year Basic Laboratory (0). Basic military skills in radio communication procedures; US and opposing forces Armor and Anti-Armor capabilities; security and intelligence reporting; nuclear, biological, and chemical battlefield; US Artillery weapons; and basic first aid. Required laboratory, field training, and/or activity module participation.

**MIS 2333 Second Year Basic (1) MIS 2333L Second Year Basic Laboratory (0).** Map reading skills, determining distance, direction, and location; analysis of terrain; and indirect fires. Required Laboratory, Field Training, and/or Activity Module.

**MIS 3310 Advanced Military Science III (3). MIS 3310L Advanced Military Science III Laboratory (0).** Advanced leadership and troop command procedures. Small unit tactics and communications. Map and compass skill. Patrolling, tactical operations. Required Leadership Laboratory. Prerequisite: Permission of the PMS.

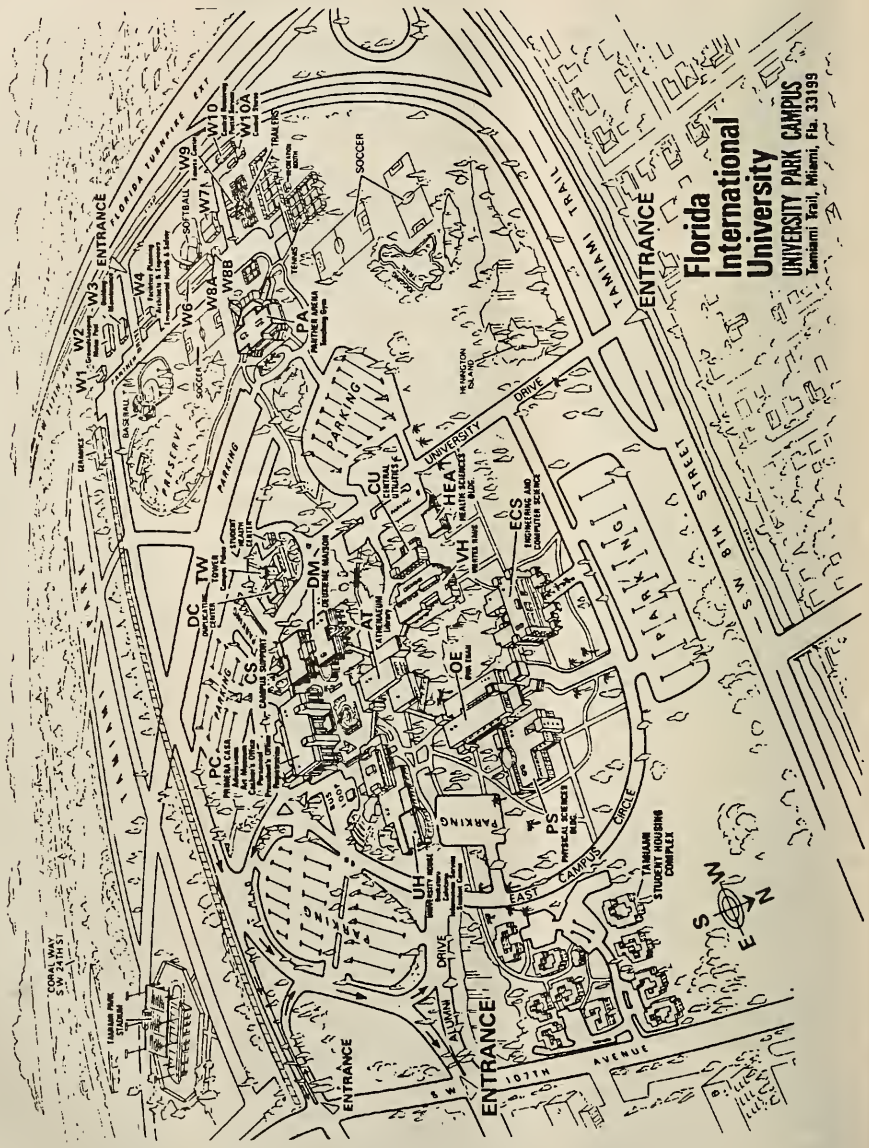
**MIS 3423 Advanced Military Science III (3). MIS 3423L Advanced Military Science III Laboratory (0).** Management and leadership. Case studies in fact finding, decision making, planning, delegation, and interpersonal skills. Motivation training with emphasis on crisis-oriented organizations. Required Laboratory. Prerequisite: Permission of the PMS.

**MIS 4120 Advanced Military Science IV (3).** Ethics and professionalism responsibilities of the military officer. The military law and justice system. The laws of war. Prerequisite: Permission of the PMS.

**MIS 4410 Advanced Military Science IV (3).** The applied leadership techniques in counseling subordinates; written and oral communications; the command, staff, personnel, logistics, and training management systems; the role of NCO's.

## Marine Officer Programs

Qualified students may apply for an officer program leading to a commission as a Second Lieutenant in the United States Marine Corps. Commissions are offered in both ground and aviation components. The Platoon Leaders Course (PLC) is offered to freshmen, sophomores and juniors who attend pre-commissioning training during the summer. Financial assistance and Flight Indoctrination Programs are available. Qualified seniors and 12 weeks of training in the Officer Candidate Course (OCC) after graduation. For details, contact the Career Development and Placement Office, or the Marine Officer Selection Officer when he is on campus.


Florida International University
UNIVERSITY PARK CAMPUS
Tamiami Trail, Miami, Fla. 33199
ENTRANCE
TAMIAMI TRAIL
S.W. 8TH STREET
S.W. 107TH AVENUE
UNIVERSITY DRIVE
EAST CAMPUS CIRCLE
ALUMNI DRIVE
PARKING
PRESERVE
SOCCER
SOFTBALL
TRAILERS
TAMIAMI STUDENT HOUSING COMPLEX
PHYSICAL SCIENCES BLDG.
ENGINEERING AND COMPUTER SCIENCE
HEALTH SCIENCES BLDG.
CENTRAL UTILITIES
CAMPUS SUPPORT
DESIGNING MAISON
CORAL WAY S.W. 24TH ST
TAMIAMI PARK STADIUM
W1
W2
W3
W4
W6
W7
W8A
W8B
W9
W10
W10A
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Florida International University
NORTH MIAMI CAMPUS
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Biscayne Bay
LIB
LIBRARY
HM
HOSPITALITY MANAGEMENT
SC
STUDENT CENTER
AC I
ACADEMIC ONE
AC II
ACADEMIC TWO
HRS/PDC
PROFESSIONAL DEVELOPMENT CTR.
AQUATIC CENTER
HOLOCAUST CENTER
PUBLIC SAFETY
PHYSICAL PLANT
CENTRAL RECEIVING
GROUNDS BLDG.
MAIN ENTRANCE
UNIVERSITY DRIVE
PARKING
TENNIS COURTS
OUTDOOR RECREATION
BASKETBALL
DOCK
BAY VISTA STUDENT HOUSING COMPLEX
N.E. 163RD ST.
N.W. 151ST ST. & BISCAYNE BLVD.
TO AND FROM MIAMI
SUNNY ISLES
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## Index

Academic Affairs, Office of, 28
Academic Calendar, 2
Academic Programs, 6
Academic Degree Requirements, 17
Academic Honors, 20
Academic Information, General, 6
Academic Program and Course Regulations, 18
Academic Warning, Probation, Dismissal, 20
Acceleration Programs, Academic, 15
Accounting, 150
Accreditation and Memberships, University, 6
Admissions, Office of, 8, 31
  Application Process, 8
  Freshman, 8
  International Admissions, 10
  Limited Access Programs, 9
  Readmission, 9
  Undergraduate Transfer, 9
Administration and Staff, 44
Advanced Placement Exams, 15
Advertising, 78
Aerospace Studies, 258
Air Force - ROTC, 258
AIDS Policy, 35
Annual Estimate of Cost, 10
Alumni Affairs, 37
Anthropology, 120
Apparel Studies, 207
Architectural Technology, 215
Army ROTC, 258
Art Education, 171
Art Museum, 30
Arts and Sciences, College of, 46
  Biological Sciences, 46
  Chemistry, 51
  Computer Science, School of, 54
  Economics, 57
  English, 59
  Environmental Studies, 64
  Geology, 66
  History, 69
  Humanities, 73
  International Relations, 75
  Journalism & Mass Communication, School of, 77
  Liberal Studies, 83
  Mathematics, 85
  Modern Languages, 88
  Music, 96
  Philosophy, 103
  Physics, 105
  Political Science, 107
  Psychology, 113
  Religious Studies, 118
  Sociology/Anthropology, 120
  Statistics, 125
  Theatre and Dance, 127
  Visual Arts, 131
  Faculty, 143
Associate in Arts, 18
Athletic, Intercollegiate, 32
Auxillary Services, 35

Biological Sciences, 46
Biology Education, 171
Board of Education, State, 5
Board of Regents, 5
Broadcast Journalism, 79
Broward County Programs, 6
Business Administration, College of, 149
  Accounting, School of, 150
  Decision Sciences & Information Systems, 151
  Finance, 152
  Management and International Business, 152
  Marketing and Environment, 153
  Faculty, 162
Business Core Courses, 150
Business and Finance, Division of, 34
Business Teacher Education, 175

Campus Ministry, 31
Campuses, University, 5
Career Planning and Placement, 31
Centers and Institutes, 37
  Accounting, Auditing and Tax Studies, 37
  Administration of Justice, Center for, 37
  Banking and Financial Institutions, 37
  Drinking Water Research Center, 39, 219
  Economic Research and Education, 38
  Educational Development, Center for, 38
  Elders Institute, 39
  English Language Institute, 39
  FAU-FIU Joint Center for Environmental and Urban Problems, 40
  FIU Institute of Government, 40
  International Institute for Housing and Building, 40
  Judaic Studies, 41
  Labor Research and Studies, 38
  Latin American and Caribbean Center, 41
  Multilingual and Multicultural Studies Center, 42
  Management Development, Center for, 39
  Public Opinion Research, Institute for, 41
  Public Policy and Citizenship Studies, 41
  Small Business Development Center, 42
  Southeast Florida Center on Aging, 42
  Women's Studies Center, 43
Certificates, 8, 18
Actuarial Studies, 86, 134
Advanced Fashion Design, 218
American Studies, 134
ARNP Program in Adult Health, 242
Banking, 153
Consumer Affairs, 134
Environmental Studies, 135
Ethnic Studies, 135
Gerontological Studies, 136
Heating, Ventilation and A/C Design, 218
Hotel and Restaurant Management, 236
Industrial Safety, 218
International Bank Management, 154
International Studies, 136
Labor Studies, 137
Labor Studies and Labor Relations, 137
Latin American and Caribbean Studies, 138
Law and Criminal Justice, 256
Legal Translation and Court Interpreting, 139
Linguistic Studies, 140
Marketing, 154
Medical Record Coding, 234
Occupational Therapy, 233
Organizational Training, 177
Student Media Advising, 141
Translation Studies, 141
Tropical Commercial Botany, 141
Vocational Technical Teacher Education, 177
Western Social and Political Thought, 142
Women's Studies, 143
Change of Grade, 20
Change of Major, 18
Chemistry, 51
Chemistry Education, 71
Civil Engineering, 194
CLAST, 11
CLEP, 15
College/Major Classification, 17
Computer Engineering, 196
Computer Science, School of, 54
Construction Management, 210
Continuing Education
  Conferences and Short Courses, 30
  Off Campus/Weekend Credit Courses, 29
Continuing Education Certificate Programs, 30
  Legal, 30
  Marketing Communications, 30
  Realtors and Brokers, 30
  Travel Agents, 30
  Video Production Certificate, 30
Core Curriculum, 11, 15
Counseling Services, 33

Courses
Drop/Add, 18
Forgiveness Policy (Repeated), 19
Course Numbering System, Statewide, 43
Credit for Non-College Learning, 15
Credit by Examination, 20
Criminal Justice, 245
Cuban Exile History and Archives Project, 42

Dean's List, 20
Decision Sciences, 151
Degrees, Two, 17
Design, School of, 207
Development, Office of, 37
Dietetics and Nutrition, 221
Disabled Student Services, 31
Drinking Water Research Center, 39, 219

Economics, 57
Education, College of, 165
Educational Psychology and Special Education, 166
Elementary Education, 167
Health, Physical Education and Recreation, 168
Middle, Secondary and Vocational Education, 170
Urban, Multicultural and Community Education, 177
Faculty, 189
Electrical and Computer Engineering, 196
Elementary Education, 167
Engineering, School of, 192
Engineering and Design, College of, 192
Civil and Environmental Engineering, 194
Construction Management, 210
Electrical and Computer Engineering, 196
Industrial and Systems Engineering, 199
Landscape Architecture and Architectural Studies, 214
Mechanical Engineering, 202
Retailing and Apparel Studies, 207
Faculty, 219
English, 59
English Education, 172
English Language Institute, 39
Enrollment Support Services, Office of, 31
Environmental Health & Safety, 35
Environmental Engineering, 194
Environmental Studies, 64
Equal Opportunity Programs, 34
Exercise Physiology, 168

Faculty Scholars Program, 16
Fashion Design, 207
Fees, 26
Final Examinations, 20
Finance, 152
Financial Aid, 22, 32
Application Procedures, 25
Grants and Scholarships, 22
Loans, 23
Refunds, 26
Repayments, 23, 26
Florida Educational Equity Act, 35
Florida International University, Officials, 5
Florida Residency Information, 21
Forgiveness Policy, 19
French, 88

General Education Requirements, 13
General Information, 5
Geography, 75
Geology, 66
Gordon Rule
Mathematics, 14
Writing, 13
Graduate Studies, Division of, 28
Grade Reports, 20
Grading System, 19
Graduation Application, 20
Grants and Scholarships, 22
Greek Organizations, 32

Health Center, 34
Health Education, 168
Health Occupations Education, 175
Health Services Administration, 248
Health, College of, 221
Dietetics and Nutrition, 221
Medical Laboratory Sciences, 223
Medical Record Administration, 226
Occupational Therapy, 228
Physical Therapy, 230
Prosthetics and Orthotics, 232
Faculty, 234
History, 69
History Education, 172
Home Economics Education, 174
Hospitality Management, School of, 236
Faculty, 240
Housing, 34
Humanities, 73

Immunization, 18
Information Resource Management (IRM), 36
Incomplete Grade, 19
Industrial Engineering, 200
Instructional Media Services, 29
Intercollegiate Athletics, 32
Interior Design, 215
Internal Management Auditing, Office of, 35
International Admission, 10
International Business, 153
International Relations, 75
International Student Services, 32

Journalism, 77

Labor Studies, 84
Landscape Architecture & Architectural Studies, 214
Legal Affairs, Office of, 35
Legal Certificate Program, 30
Liberal Studies, 83
Libraries, 29
Limited Access Programs, 9
Loans, 23

Majors, dual, 18
Management, 152
Management Information System, 152
Maps, Campus, 260
Marine Officer Programs, 259
Marketing, 153
Mathematics Education, 172
Mathematical Sciences, 85
Mathematics, 85
Mechanical Engineering, 202
Media Relations, Office of, 37
Medical Record Administration, 226
Medical Laboratory Sciences, 223
Military Programs, 258
Minority Student Programs and Services, 33
Minors, 7, 18
Modern Languages, 88
Modern Language Education, 173
Music, 94
Music Education, 173

New World School of the Arts, 6
Non-Degree Seeking Students, 17
North Miami Budget and Information Resource Management, 36
Nursing, School of, 241
Faculty, 244

Occupational Therapy, 228
Off-Campus Courses, 29
Organizational Training, 176
Orientation, 33

Parks and Recreation Management, 168
Personnel Management, 152
Personnel Relations, Office of, 35
Philosophy, 103
Physical Education, 169
Physical Plant, Department of, 36
Physics, 105
Physics Education, 173
Physical Therapy, 230
Political Science, 107
Portuguese, 88
Post-Secondary Technical Education, 176
Precollegiate Programs, 33
Pre-Medical Advisement, 16
Pre-Law Advisement, 16, 108
Print Journalism, 79
Professional Education for Realtors and Brokers, 30
Professional Travel Agents Certificate, 30
Prosthetics and Orthotics, 232
Psychology, 113

Public Affairs and Services, School of, 245
Criminal Justice, 245
Health Services Administration, 248
Public Administration, 251
Social Work, 253
Faculty, 256
Public Relations, 79
Public Safety, 33
Publications, 37
Purchasing Services, 36

Readmission, 9
Recreational Sports, 32
Refunds, Fees, 27
Registration and Records, Office of, 16, 33
Registration Procedures, 18
Religious Studies, 118
Residency, Florida, 21

Scholarships, 22
Sexual Harassment/Educational Equity, 35
Social Studies Education, 174
Social Work, 253
Sociology, 120
Southeast Florida Educational Consortium, 6
Southeast Regional Data Center (SERDAC), 36
Spanish, 88
Special Education Programs, 166
Sponsored Research and Training, 30
Sports Management, 170
Statewide Course Numbering System, 43
Statistics, 125
Student Accounts, 26
Student Activities, 33
Student Affairs, Office of, 31
Student Classification, 16
Student Government Association, 33
Student Judicial Affairs, 34
Student Records, 20
Student Union, 34
Summer Enrollment, 18

Technology Education, 176
Telecommunications, Office of, 36
Telephone Registration, 18
Testing Office, 11
Theatre and Dance, 127
Transfer Credit, 15
Transient Students, 17
Transcripts, 21
Traveling Scholars Program, 16

Undergraduate Studies, Office of, 11, 28
University Budget Planning Office, 37
University Computer Services, 36
University Events, Office of, 37
University Honors Program, 16
University Learning Center, 11
University Officials, 5
University Physical Planning, 35
University Relations and Development, 37
University Relations, 37
Urban Education, 177

Veteran's Affairs, 21
Video Production Certificate, 30
Visual Arts, 131
Vocational Home Economics Education, 174
Vocational Industrial Education, 174

Withdrawal, Student, 19

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